DOCUMENT RESUME

ED 380 530 UD 030 340

AUTHOR	Fernandez, Ricardo R.; Timpane, P. Michael
TITLE	Bursting at the Seams: Report of the Citizens' Commission on Planning for Enrollment Growth.
INSTITUTION	New York City Board of Education, Brooklyn, N.Y.
PUB DATE	30 Jan 95
NOTE	75p.; Separately published six-page "Executive Summary" is appended.
AVAILABLE FROM	Office of the Chancellor, New York City Board of Education, 110 Livingston Street, Brooklyn, NY 11201.
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Building Plans; *Class Size; Cooperation; Crowding; *Educational Facilities Planning; Educational Finance; Elementary Secondary Education; *Enrollment; Enrollment Trends; Facility Utilization Research; Financial Support; Magnet Schools; *School Space; *Urban Schools; *Year Round Schools
IDENTIFIERS	*New York City Board of Education

ABSTRACT

The independent Citizens' Commission on Planning for Enrollment Growth for New York City has concluded that the school system is experiencing explosive enrollment growth, and that current strategies are incapable of dealing with this growth. The only way to forestall a crisis is to increase classroom space significantly. Given current demographic trends, the enrollment of 1,016,000 students in 1993 will reach close to 1,250,000 by the 2002-03 school year. Recommendations for coping with this increase include: (1) implementation of a pilot plan to convert schools to a year-round calendar; (2) increasing relative use of leasing, rather than new construction, as a strategy to increase space; (3) expansion of efforts to form collaboratives with higher education and nonprofit organizations; (4) expanding the relocation of administrative offices from school space; (5) rezoning overutilized schools; (6) promoting interdistrict cooperation; (7) establishing magnet and special program schools in underutilized facilities; (8) reforming placement for special education; (9) using connections with the business community to find space; (10) seeking increased federal funding; and (11) establishing a bonding authority dedicated to school space. Eleven tables and five figures illustrate the discussion. Four appendixes provide supplemental information. (SLD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

BURSTING AT THE SEAMS:

REPORT OF THE CITIZENS' COMMISSION ON PLANNING FOR ENROLLMENT GROWTH

ED 380 530

Ricardo R. Fernandez
P. Michael Timpane
Chairmen

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Ronald C. BRADY

NYC BOARD OF ED

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

UD030340

JANUARY 30, 1995

BEST COPY AVAILABLE

TABLE OF CONTENTS

VOLUME ONE:
THE REPORT OF THE CITIZENS' COMMISSION ON PLANNING FOR ENROLLMENT GROWTH

SECTION I. Preface 1

SECTION II. More Than Making Do: Thinking About Enrollment Growth 3

SECTION III. A Student Space "Bill of Rights" 9

SECTION IV. The Recommendations of The Citizens' Commission on Planning for Enrollment Growth 11

SECTION V. Members of the Citizens' Commission on Planning for Enrollment Growth 25

VOLUME TWO:
APPENDIXES

Appendix A. Enrollment Growth in New York City A1

Appendix B. Comparison of the Accuracy of Board of Education and Department of City Planning Projections B1

Appendix C. The Board of Education's Measures of School Utilization C1

Appendix D. Calculating Estimated Seats D1

VOLUME ONE

THE REPORT OF THE CITIZENS' COMMISSION ON PLANNING FOR ENROLLMENT GROWTH

SECTION I

PREFACE

In February 1994, Ramon C. Cortines, Chancellor of the New York City Board of Education, called for the creation of an independent Citizens' Commission on Planning for Enrollment Growth in recognition of the growth of student enrollment in the New York City public schools. The members of the Commission were drawn from all five boroughs and consisted of public officials, representatives of the community school districts and the private sector, professional educators, and students. The Commission was chaired by Ricardo R. Fernandez, President of Lehman College of the City University of New York, and P. Michael Timpane, Professor and former President of Teachers College, Columbia University. The work of the Commission was coordinated by the staff of the Institute for Urban and Minority Education at Teachers College.

After eight meetings and the examination of enrollment projections, the Commission has formulated a number of recommendations for increasing the amount of space available to educate the growing number of students enrolling in the New York City schools without overcrowding. These recommendations constitute the first part of the following report. Enrollment projections, the results of studies undertaken by the Commission, and the technical information used by the Commission in formulating the recommendations are included in the Appendixes.

Research support for the Commission was provided at the Board of Education by Ronald Brady, Assistant to the Chancellor for Planning and Restructuring, and at the Institute of Urban and Minority Education, Teachers College, Columbia University, by Erwin Flaxman, Associate Director, and Francisco Rivera-Batiz, Director.

The research staff of the Commission consulted with and wish to thank the following individuals: Aramina Ferrer, Principal PS 46 Bronx; Harry Kritzer, Esq.; Harold Levy, Chairman, Commission on School Facilities and Maintenance Reform; Amy Linden, Former Chief Executive for School Facilities, New York City Board of Education; Madeline Lumachi, Brooklyn College Academy; Rosemary Marr, Brooklyn College Academy; James Meier, Director, Redistricting Advisory Study Group; Michelle Roberts, The Andrew W. Mellon Foundation; James P. Query, Morgan Stanley and Co., Incorporated; Phil Wolf, Muss Development Company; plus the numerous employees of the New York City Board of Education who shared information and insights with us.

SECTION I

The following Board of Education officials and staff provided research and administrative support: Antonia DeLeon, Cheryl Hood-Francis, Norman Wellen, David Schechter, Josh Plaut, Barbara Donohue, Jacqueline Wong Posner and Marcia Pitter.

At the Institute for Urban and Minority Education, the following staff provided research and administrative support: Gary Burnett, Robert Agodini, Lilian Marti, and Denise Gretchen.

The Commission gratefully acknowledges the generous financial support of the New York City Board of Education, Teachers College/Columbia University, the Leon Lowenstein Foundation, Inc., J.P. Morgan & Co. Incorporated, Newsday and New York Newsday, and the Muss Development Company.

The Commission also gratefully acknowledges the cooperation of the several schools that welcomed us to conduct our research. The schools have asked to remain anonymous.

Additional copies of this report can be ordered from the Office of the Chancellor, New York City Board of Education, 110 Livingston Street, Brooklyn, N.Y. 11201.

SECTION II

MORE THAN MAKING DO: THINKING ABOUT ENROLLMENT GROWTH

In June 1994, Chancellor Ramon C. Cortines asked us, the members of the Citizens' Commission on Planning for Enrollment Growth, to study the projected enrollment growth in the New York City public schools in the upcoming years and to develop a plan that would ensure that all the learning needs of the students in the system are met during this period of growth.

The Commission has concluded that the school system is currently experiencing explosive enrollment growth. In a number of schools, the space problems brought on by this growth are already intolerable and will create a crisis in the very near future. Moreover, current strategies are in no way capable of dealing with this enrollment growth. The only way to forestall this crisis is to significantly increase classroom space.

In the five years from October 1988 to October 1993, student enrollment grew by close to 80,000 students, a growth unequaled in recent decades. Reversing a downward trend which reduced enrollments by close to 200,000 from 1972 to 1982, the number of public school students has climbed back up quickly. In October 1982, there were 918,384 students in the public schools. Eleven years later, in October 1993, enrollment reached 1,016,000 students, exceeding the one million mark for the first time since the 1977-1978 school year. By itself, this increase exceeds the total public school enrollment in such large cities as Atlanta, Boston, or Newark. We estimate that public school enrollment in New York City will increase by over 200,000 students over the next eight years. Given current demographic trends, enrollment will rise to close to 1,250,000 by the 2002-03 school year.[1]

Currently, enrollment growth is occurring at all grade levels, most seriously in the high schools and elementary schools. Between 1992 and 1993, for example, the number of students enrolled in the high schools rose by 9,245. This is a 3.2 percent growth of the high school population in one year. During the same year there was an increase of 8,644 elementary school students, which represents a 1.7 percent expansion in enrollment. In the intermediate schools enrollment grew by 2,684 students in this period, or by 1.4 percent. Adding students in special education schools, the total enrollment growth in the system amounted to 22,197 students, constituting a 2.2 percent increase over the enrollment in 1992.

---

[1] Enrollment growth projections are currently provided by several city and state institutions in New York, including the Board of Education, the Department of City Planning, and the State Education Department. All of the forecasts predict both short-term and long-term enrollment growth. The Commission has examined the alternative projections and concludes that those used by the Board of Education are the most comprehensive and accurate forecast of the short-term growth in the New York City public schools system. A discussion of the projections is provided in Appendix B.

SECTION II

This enrollment growth has been absorbed by the school system without a major investment in new space. Many schools have reached full capacity, and in some districts virtually all schools are being utilized above capacity. Schools programmed for 300 students hold over 600 students. Classrooms programmed for 30 students now pack over 40 children in them. In the most severe cases, classes are held in closets, bathrooms, hallways, and wherever any space can be found. More typically, rooms originally designed to serve as offices, cafeterias, gyms, libraries, storage rooms, and other common or specialized spaces have been reassigned for classroom use. Some schools have leased space or built temporary structures on the school grounds, but these have not provided enough space to alleviate overcrowding.

There is little space available in the schools to solve the problems of the current enrollment growth. The enrollments are not growing in schools where space is available; more significantly, the space which would have been available in underutilized buildings sold by the Board of Education in the 1970s cannot now be returned. Moreover, the school system's existing physical plant is deteriorating. The improvement of the facilities—the need for adequate resources for the renovation, enhancement, expansion and even the basic maintenance of school space—has traditionally taken a back seat to many of the city's other needs.

It is the Commission's belief that to receive an adequate education every child must have access to sufficient, safe, supportive, and stimulating space, appropriately designed for instruction. However, the dilapidation and overcrowding of the schools are compromising the school system's ability to provide basic instructional programs. Furthermore, the system cannot introduce sophisticated educational technology into the schools because of the electrical and space limitations of the buildings. With each passing day, unaddressed shortcomings in the physical plant put New York City's children further and further behind their counterparts in other communities.

In addition, the Board of Education's Division of School Facilities and the New York City School Construction Authority—the two principal guardians and trustees of our schools' physical plant—have not always made the most efficient and effective use of their limited resources.[2] Inadequate resources and uneven management are, all too often, depriving children of the education they need.

---

[2] Based on the *Interim Report* of the Commission on School Facilities and Maintenance Reform, October 17, 1994; *Failing the Grade for the School Construction Authority*, A Report of the Senate Committee on Investigations, Taxation, and Government Operations, September 1, 1994; *Capital Improvement Projects, New York City Construction Authority*, Report of the Office of the State Comptroller, March 23, 1994; *Review of Timeframes to Construct New Schools and Modernize Existing Facilities*, Report of the Office of the State Comptroller, August 6, 1993, and other reports.

SECTION II

MAKING DO

New Yorkers almost by necessity are a resilient people. None, though, are more adaptive than the teachers, administrators, students and parents in our schools. Educators are loathe to admit that they are not able to cope with the space and program demands of overcrowded schools, but we should not take their ability to endure as a sign that they do not have a problem. The time has come to realize that "making do" is not always the right thing to do; the practice of ingeniously squeezing students and programs into any available space in an overcrowded school is an endless shell game which has gravely harmed the education of students in the New York City schools.

Since the mid-eighties, some new seats have been created through construction, leasing facilities, and modernization and repairs. But, for the most part, the schools have absorbed the higher enrollments by finding new uses for existing space or by putting more students into existing classrooms. Ironically, these solutions to space shortages can mask the extent of overcrowding in individual schools by increasing the total square footage of physical space available for instruction, even though this new space may not be appropriate for instruction. In this way a school considered to be overutilized one year may be operating at or below limits the next, even though its prescribed physical dimensions have not changed and its student population has increased. But despite appearances we know, as one Commissioner put it, that "a sponge can hold only so much water."

In elementary schools, overcrowded classrooms barely meet requirements for teacher-student ratios, and so must add teachers or paraprofessionals. In these same schools the number of pre-kindergarten classes are reduced or entirely eliminated because there is no space. Cluster rooms and common space are used for multiple activities, far beyond those for which they were originally intended. Lunch periods can begin as early as 9:00 a.m., and extend far into the afternoon. In some intermediate schools the pressure to utilize all available space during each period means that no room belongs to a teacher or to a class; students spend the day moving around the building from one classroom to another. In the high schools every available space is a candidate for a classroom. Under such conditions art, music, and the other fine arts are considered expendable frills because all available space has to be used for "basic" educational needs.

Civic conscience dictates that these practices cease, and that non-instructional spaces—libraries, gymnasiums, laboratories, lunchrooms, closets, and school yards—be returned to their original use. These spaces were never meant to be used as classrooms. Students belong in conventional classrooms in conventional school buildings, not in hastily improvised space.

SECTION II

OVERCROWDING AND STUDENT LEARNING

The school system's ingenuity in finding a place for every student should not blind us to the effect of overcrowding on student achievement and learning. In New York City the lowest income students in overcrowded schools have lower test scores than their counterparts in other schools. In one instance, there was a four to seven percent difference in the number of students in overcrowded schools passing the Regents Reading Examination and the number of similar students passing in schools that are not overcrowded.[3]

We already know that smaller classes mean more to marginal students than to other students. We also know that the more dense and overcrowded the classroom, the more teachers and students will revert to habitual teaching techniques and learning patterns. In overcrowded schools teachers all too often are unable to do anything more than cover the required material, with little time for exploration. Administrators, even where there are more assistant principals assigned to the schools, must devote their time to traffic control and maintaining order, not to leading the school toward improvement or reform.

We have talked to the students and teachers who must spend their days in overcrowded schools. Elementary school students bluntly tell us that there are too many students in their schools and in their classrooms, that there is no quiet place to study, and that they would not want to return to their school next year even though they have many friends there. (Credit the commitment and ingenuity of their teachers, though: these same students say that most of the time they can find a private place to talk to a teacher or counselor, despite overcrowding.) Teachers rank overcrowding and the lack of adequate classroom space as the most serious problem in their schools, above the unavailability of classroom resources, poor maintenance, the lack of discipline, or increased student violence. Teachers say that overcrowded schools are noisier, that they create more non-instructional duties and paperwork, and that, without question, they inhibit teaching and learning.

The conditions we tolerate in the schools would be unacceptable in the workplaces where we spend our days and earn our salaries. Imagine three people sitting at your desk in your office, having to eat lunch at 10:30 in the morning, conducting a meeting in a closet or using a toilet that does not always flush, and you will get a sense of the conditions in many overcrowded schools.

---

[3] *A Study of the Consequences of Overcrowding in New York City Schools*, Institute for Urban and Minority Education, Teachers College, Columbia University, 1995.

Educating students in adequate space, however, is not the only issue now before us. The newly-arrived immigrant students—who constitute the vast majority of the new enrollments—need tailored language instruction, early childhood and special education programs and non-instructional health and counseling services—including family services—to support their classroom learning. Just as there can be little learning in a space never meant for instruction, a space where students are not being helped to learn is only an empty place.

PAY NOW OR PAY MORE LATER

Over the last twenty years the improvement of New York City's education program has taken precedence over the improvement or expansion of the physical plant. The many calls of the Board of Education for funds for capital improvements have gone unheeded: at best, the Board has consistently received only about twenty-five percent of its needs for capital funds. Essential new schools have not been built, and existing school buildings have not been repaired as they should. In order to make do, the Board has not taken a school out of service because of the inadequacy of the facility in twenty years. It is not that the schools are adequate or well maintained; it is just that the Board cannot afford to lose any available space, no matter how inadequate.

Clearly, as grave as our space problems are now, they pale in comparison with the problems we will face in the future. Electronic technology, which will increasingly be used to deliver instruction, requires an even greater investment in space, and demands school buildings that can carry heavier electrical loads than any school building now can. New and existing schools will have to be designed or redesigned to accommodate instructional technology. New spaces in the schools will have to be adaptable; the permanent classroom walls so familiar today will become permeable, able to accommodate rapid changes in educational programs.

Few, if any, of the schools we now have will be able to house this kind of instruction. Imagine then what will happen to New York City—a city whose economy increasingly depends on mental rather than physical work and on communication—if its schools are not constructed to educate youth to think and to communicate. Surely, if we do not pay to build or refurbish schools for the future now, our children will be in danger of losing their part in that future. This is an unspeakable cost to pay.

SECTION II

SHORT-TERM AND LONG-TERM STRATEGIES

The Board of Education and the teachers, administrators, students, and parents in the New York City schools must continue to draw on their resilience and adaptability to deal with the problems of school overcrowding. But not by themselves. The problem of school overcrowding is also a public problem: it cannot be solved by the Board of Education and the community school districts alone.

In this report, the Citizens' Commission on Planning for Enrollment Growth recommends many short-term strategies for alleviating the problems of overcrowding. The Commission does not only recommend constructing new schools. A school has a half-century life, and we only have enrollment projections for the next decade: we do not want to overbuild as we have in the past. But even more, the enrollment crisis before us requires that we take immediate action and not wait for the funds to construct new schools to become available. Expediency dictates that we act now using whatever resources and devices are available to alleviate the problems of overcrowding.

We encourage the Board, the community school districts, and individual schools to find those practical strategies that will work best for them. But these solutions should only be the first part of a long-term strategy for alleviating overcrowding in the schools. Alone, optimistically, they would not solve even 20 percent of the problem of overcrowding, and may make the problem more severe as we use scarce financial resources only for stop-gap measures.

No one should mistake our central concern: our now-serious problem will become perilous in the near future. If the New York City's schools are to survive, both the City and State must find the funds to increase the capital budget for the city's schools within the next several years, not only to renovate and renew those existing schools that are in need of major expansion and repair, but also to build the versatile school spaces that we will require in the future.

We call upon the various school communities—parents, teachers, administrators, and students—to accept the hardships of our proposed short-term solution, but with an agreement and plan for the city, state, and federal governments to help provide the resources to implement a long-term solution for reducing overcrowding in the schools. If we value our children and their hopes for the future, there can be no other viable alternative.

SECTION III

A STUDENT SPACE "BILL OF RIGHTS"

It is the Commission's belief that to receive an adequate education every child must have access to sufficient, safe, supportive, and stimulating space, appropriately designed for instruction. This includes:

1. The right to receive instruction in a classroom. A classroom is a room designed for instruction, not as a hallway, or as a bathroom, or for office work. A classroom has a chalkboard, adequate wiring for modern technology, display space for student work, a safe place for student belongings, and appropriate classroom furniture. Currently, approximately 70 percent of New York City schools provide this right, except for adequate wiring for modern technology which is provided by approximately 30 percent of schools.
2. The right to benefit from opportunities for experiential learning in laboratories appropriately equipped for this purpose for each grade level and each child's needs. In the higher grades, students have a right to have access to these facilities for at least 90 minutes every week. Currently, approximately 80 percent of New York City schools provide this right.
3. The right to specialized areas in the school for instruction in music, art, skilled trades, and computers. Currently, approximately 75 percent of New York City schools provide this right.
4. The right to a quiet, private, and secure space in which to receive individual testing and evaluation and one-on-one counseling. Currently, approximately 60 percent of New York City schools provide this right.
5. The right to clean, secure and accessible common areas including a school library, a gym, a playground, an auditorium with a platform for school gatherings, and a cafeteria that can provide hot food. Currently, approximately 30 percent of New York City schools provide this right.
6. The right to adequate heating, lighting, and cooling for doing schoolwork comfortably. This includes full air conditioning for all school sessions taking place during summer months. Currently, approximately 98 percent of New York City schools provide this right, with the exception of cooling, which is provided by approximately 5 percent of schools.

SECTION III

7. The right to accessible and functional bathrooms and water fountains with clean uncontaminated water, proximate to classrooms. At the pre-kindergarten and kindergarten levels, children have a right to a bathroom in their classroom. Currently, approximately 60 percent of New York City schools provide this right.
8. The right to a school that is handicapped accessible. Currently, approximately 20 percent of New York City schools provide this right.

The Board of Education should use these minimum specifications to assess its provisions for the basic educational needs of this city's children. Existing schools in New York City should seek to reach these standards. New schools should be constructed with these requirements in mind. Leased space should recognize and seek to meet these needs.

SECTION IV

THE RECOMMENDATIONS OF THE CITIZENS' COMMISSION ON PLANNING FOR ENROLLMENT GROWTH

Based on the projected pace and magnitude of enrollment growth, the Commission estimates the need to create 183,700 new seats to accommodate the number of students projected as of the 2002-03 school year.[3] Nothing short of a massive investment in money for space will adequately address this need. However, the current fiscal circumstances of the city, state and federal governments make this a difficult time to seek such funding. Given such constraints, the Board of Education and the larger school community must first exhaust every potential means within existing resources to address overcrowding. With this in mind, the Commission first has identified a number of steps that can be taken immediately. Then, it recommends and explains the longer-term steps to be taken to secure the funds for space for the increasing number of students and to alleviate overcrowding in the schools.

This Commission wishes to be very clear. Neither exhausting existing opportunities, nor the most creative thinking, nor the best management practices will meet the projected enrollment needs of the public schools. The school system must immediately and vigorously do its part to demonstrate a good faith effort. At the same time, the city, the state, and the federal governments must find new ways to help meet the need, not only by allowing for greater creativity in the use of existing resources, but also by increasing funding out of existing resources, and making bold efforts to identify new funding sources with which to create new space.

USING TIME

Recommendation 1:

> The Board of Education should immediately implement a pilot plan to test the feasibility of converting the New York City schools to a year-round calendar by extending the school year from nine months to twelve months.

Most schools, unlike such organizations as hospitals and businesses, close early in the day, and operate on a nine-month calendar, limiting the amount of time that can be used productively for instruction. If schools were to stay open for longer periods of the day or the year, they could educate more students without overcrowding classrooms, using non-instructional

[4] See Appendix D for a detailed description of the estimating process and for estimates of the potential impact of a number of the recommendations.

space for classrooms, or constructing costly new buildings.

This is not the same as extending the school year. In a year-round schedule students attend school the same number of days—180—as students on the nine-month calendar; however, they have several short vacations rather than one three-month-long summer break. By switching to the year-round calendar districts can fit more students into existing buildings, saving millions of dollars in construction costs.

Most year-round schools operate on what has been called a multi-stream calendar, grouping students into three or four streams. While one group is on vacation, another uses the vacationing group's classroom space. Because at any given time part of the student body is on vacation, building capacity can be increased without any additional construction. Thus, for example, with four streams, a school building built for 750 students can enroll as many as 1,000 students.

Because of economies of scale, year-round education does not increase per-pupil cost. Generally, when a school reaches between 115 and 120 percent of its capacity, it costs the same amount of money to educate a student on a year-round calendar as it does on a traditional nine-month calendar. The cost of employing principals, secretaries, custodial staff, and food service workers, however, does increase in year-round education because these staff must be employed on a twelve-month contract rather than a ten- or eleven-month contract. However, the cost of employing regular teachers remains the same because the teachers have the same schedule as the students—25 percent of the teaching staff and the students are off at any given time. The costs of maintaining the school and the school grounds may increase in year-round education, because of the increased utilization, but the maintenance cost per-square-foot-per-day remains the same. This increased utilization may, however, lead to additional long-range costs for building maintenance and equipment, which will not become evident until after a few years of year-round schooling. Still, whatever the increased costs, they pale beside the cost of new construction.

Year-round schooling does not have a negative effect on student achievement, but helps students retain what they have already learned. Disadvantaged students and those for whom English is a second language forget much of what they have learned during the school year while on long summer vacations. Because these—and other students—retain more when their formal learning is interrupted for only short periods, teachers in year-round schools need to spend less time reviewing pre-vacation material than teachers in nine-month schools.

Some schools already extend the school day. By extending the school day, the number of students educated in the same space increases. In the past this has frequently been instituted as a temporary measure, a stop-gap while awaiting the construction of new buildings. Now, how-

ever, many see it as a way of alleviating the chronic overcrowding of an increasing number of elementary and high schools in the city.

The use of staggered or end-on shifts, in which a school opens earlier and closes later, can increase the school's capacity by as much 100 percent, at least in elementary schools. However, there are drawbacks. Sometimes, class time must be reduced to accommodate more students, even when the school day is much longer. In almost all extended-day schools, library use declines, study hall sessions must be cut, and fewer students enroll in music, art, and other non-academic subjects. There is less teacher preparation time, increased alienation among students, and more noise in the school because of the number of students in the school in the middle of the day when their schedules overlap. And, in general, parents feel that their children receive an inferior education in a school with an extended-day schedule. However, because extended-day programs allow a single set of facilities to be used for an increased number of students, they bring a net savings in buildings, equipment, and other material facilities. But they do carry some hidden costs, including the maintenance or replacement of the physical plant because of extra wear and tear, the need for extra storage space and offices, bus transportation for students arriving at different times, and non-instructional staff time.

The Commission recommends that the Board of Education immediately implement a pilot plan to test the feasibility of converting the New York City schools to a year-round calendar by extending the school year from nine months to twelve months. The Commission estimates that implementing year-round education on all of the system's current or planned air conditioned schools would provide an additional 16,000 seats. Further, it recommends extending the school day only as a stop-gap measure.

This should be done in two phases. The Board of Education first should designate one or two air conditioned high schools to operate on a year-round calendar, beginning in September 1995, and should assess the impact of year-round education on the costs of school operations. The Board should also plan to convert the remaining air conditioned high schools and fifty percent of the air conditioned community schools to a twelve-month calendar. By September 1996, when the second wave of schools are put on a year-round schedule, the Board should develop a plan to extend year-round education to the other air conditioned schools and to any other schools interested in using this strategy to overcome crowding. By September 1997, the Board of Education should assess the impact of an extended-school-year calendar on school operations and student outcomes.

As a stop-gap measure, overcrowded schools that cannot find additional space within their physical plant, cannot lease or add temporary space, or have not converted to a year-round calendar, should extend the school day to accommodate increased enrollment. This likely is only possible in the high schools, in most of which it has already been done.

SECTION IV

LEASING

Recommendation 2:

> The Board of Education should increase the relative use of leasing, and decrease the relative use of new construction, as a key strategy through which to increase system space capacity to address current enrollment growth.

The use of leasing as a mechanism to address rising enrollments has increased significantly in recent years in the New York school system, for two reasons. First, leasing provides a quick way to acquire school space: it typically takes a maximum of two years to identify, acquire, and prepare leased space for school use, compared to an average of four to five years to create useable space through new construction. Second, leasing space for schools has proven cost-effective; capital renovations for leasing average $10,000 per seat versus $40,000 per seat for new construction.

Coupled with rapidly rising enrollments, the relative cost of leasing has led to its expanding use in the past few years, with an increase from nine leases executed in 1989 to twenty in 1994. In the Commission's view, however, the program has largely been reactive to immediate needs, and has grown without sufficient planning to ensure the most efficient and cost-effective management practices.

Given the cyclical history of enrollment growth, future enrollment, while projected to increase well beyond current planned capacity, may at some future point subside. This possibility contributes to the benefits of leasing. If enrollments level off, the use of leasing to address enrollment increases would prevent the city and the school system from being saddled with excess capacity from overbuilding.

The Board of Education's future space needs are so great that leasing as a tool to address enrollment growth should increase significantly. However, the leasing program should be more proactively and professionally managed. In this respect, the Board could consider turning the program over to another entity better capable of managing it. The Board of Education should, in the next few years, become a major tenant of leased space in the city. This will bring the Board significant power to bargain for better rates and more beneficial terms, particularly in the current depressed real estate market. Currently, the school system is scheduled to turn back leased space to landlords at the end of the lease term, with no provisions being made to provide the Board with options to acquire leased space at the end of the lease term. The Board should negotiate lease-purchase agreements, which would provide it with the option to purchase leased sites at beneficial terms at the end of a lease.

Thus, the Commission believes that the Board of Education should increase the relative use of leasing as a means of rapidly increasing system space capacity to address current enrollment growth. It further recommends that the Board explore more aggressively the use of lease-purchase options in its leasing program.

BUILDING COLLABORATIVE PROGRAMS

Recommendation 3:

> The Board of Education should expand its efforts to form collaboratives with universities, businesses, and non-profit organizations that offer out-of-school learning environments for students.

The Board of Education currently operates a series of programs wherein New York City public school students receive instructional services outside of the confines of the traditional classroom setting. These programs range from work-experience programs in city businesses, to courses offered at local colleges, and to evening and summer programs allowing students to accelerate their education.

One specific example of this is the Middle College high school programs run at several City University colleges. These programs, in addition to freeing up school space, provide unique learning opportunities for students in the world beyond the classroom. Students learn job skills, interact with adults in the workplace, get a real preview of college life and the demands of the college classroom, and learn from the different environments in which they receive instruction. Included under the rubric of collaborative programs are the school system's evening and summer school programs, which though they are not strictly collaborative, do provide an alternative setting for students to be educated. These programs were designed for their educational value, but have the side benefit of freeing up needed space in schools.

As Appendix D details, these programs provide services to over 164,000 students, effectively freeing up approximately 33,250 seats that would otherwise be needed in city schools.

The Commission recommends these programs be expanded, for both their educational and space benefits. A 10 percent expansion of these programs would free up approximately 3,325 seats.

SECTION IV

RELOCATING BOARD OF EDUCATION ADMINISTRATIVE SPACE

Recommendation 4:

> The Board of Education should expand the practice of relocating administrative offices from school space.

While the Board of Education in recent years has admirably removed many administrative offices from overcrowded schools, this effort is not complete. At present, approximately 35 schools with utilization rates greater than 100 percent house Board of Education administrative offices that could be moved. Were these offices moved, they could provide sufficient space for approximately 5,000 additional school seats.

The Commission recommends that all central and community school district administrative offices located in space in overutilized schools be removed within the next year.

EQUALIZING SCHOOL UTILIZATION—REZONING, REDISTRICTING, AND MAGNET PROGRAMS

Recommendations 5, 6, & 7:

> The community school districts should rezone significantly overutilized schools in cases where measurable educational underachievement is evident. The Board of Education should, when necessary, intervene to ensure that a standard for this rezoning is enforced systemwide.
>
> The central Board of Education should encourage inter-district cooperation to distribute available school space more evenly across community school district lines, where measurable educational underachievement is evident. The Board of Education should, when necessary, intervene to ensure that a standard for cross-district placement is enforced systemwide.
>
> The community school districts and high schools should place future magnet and special program schools in significantly underutilized facilities as a mechanism to attract students to these schools as part of the school choice program. The Board of Education should ensure this is enforced systemwide.

One way to address the system's enrollment growth and resulting space challenges is through redefining the legal boundaries that determine which schools are attended by specific

students. Indeed, many have conjectured that a mere shuffling of these boundaries could solve the system's current overcrowding problems.

The Commission briefly looked at zoning as a tool to equalize utilization. Attendance zones have traditionally been the principal determinant of which schools elementary and middle school students attend in New York City. Throughout the 1970s, rezoning was used to address racial balance, as well as to balance school utilization. Underutilized schools with racial imbalances were targeted for integration. Thus, rezoning has in the past been a tool to level space utilization and reduce excess capacity among schools in adjacent attendance zones, and can remain one in the future.

While there may be some merit to this practice, moving school attendance zone boundaries offers only a limited mechanism to address overutilization. Zoning changes carry with them numerous other considerations relating to integration, control by the local school district, and the wishes of the local community, all of which might conflict with the desire to rezone to lessen overcrowding.

The Commission also looked at redistricting, a separate though related issue. As with zoning, redistricting has a number of impacts beyond overcrowding. Because of this, the Board of Education charged the Redistricting Advisory Study Group with developing redistricting plans based on 14 individual criteria, including school utilization. It is the Commission's view that this comprehensive study of redistricting is the most appropriate way to consider equalizing utilization and that redistricting should not be pursued as a stand-alone strategy.

These constraints notwithstanding, some strategies can be employed by the Board of Education to promote and—in some instances—mandate equalization of utilization within and across school district lines. Specifically, the Board should define a standard for when excessive overcrowding combined with educational underachievement in a school merits action to reduce the school's utilization. The Board should then encourage districts to rezone attendance areas and cooperate with proximate districts to relocate students across district lines, using these standards. When districts prove unable to accomplish this relocation, the Board should intervene to compel rezoning and cross-district cooperation to relieve overcrowding in the low performing school.

In addition, new magnet and special school programs can be placed in underutilized schools to make them more attractive. Through the mechanism of school choice, this strategy should also serve to better equalize utilization.

SECTION IV

EVALUATING SPECIAL EDUCATION

Recommendation 8:

> The Board of Education should continue to vigorously evaluate and reform the process of student placement into special education. If the rate of enrollment growth in special education programs remains the same or increases, the system's future space problems will increase.

The accelerated growth in the special education student population has strained classroom space because of the smaller class sizes required for special education. Many educators in the city believe this growth is not equivalent to an increase in disabilities, but rather is a result of decisions that incorrectly place troublesome children into special education. There are two options for solving this problem. The first is to construct smaller classrooms for the standard smaller special education classes. The second is to try to reduce the population inappropriately defined as special education students.

The Commission believes that the school system's ongoing attempts to do as much as possible to pursue the former should be continued. It is more important, however—particularly from the perspective of the child—to improve the evaluation of students being considered for placement in special education as well as of students being considered for transition out of special education. The Commission believes that these efforts will have a longer-term positive impact on space, and thus encourages them.

EXPLORING OPPORTUNITIES TO USE SPACE IN PRIVATE BUSINESSES

Recommendation 9:

> The Board of Education should identify representatives of the business community to more fully explore the opportunities for the use of vacant commercial space for schools.

In addition to providing educational space as part of collaborative educational programs as mentioned above, an opportunity may exist for private companies to provide unused commercial space to support the Board of Education's growing student population. As a result of recent corporate downsizing, it is likely that there are pools of unused commercial space that could be considered for school space. Given this, it may be possible for private companies to provide school space for use as early childhood or early grade programs in their facilities. These programs would provide companies with an on-site educational facility that could act

as a benefit to its employees, serve the needs of employees who are parents of young children, and provide an outlet for employees who wish to spend time tutoring or otherwise supporting public schools. This might give companies a competitive edge in attracting employees, and businesses could benefit from potential tax write-offs. Were one early learning center established in each community school district serving two classes each of all-day pre-kindergarten, all-day kindergarten, and first and second grade, the total population served would be 5,760 children.

The Commission, however, remains uncertain as to the availability of usable commercial space for education, the willingness and ability of the business community to provide the space in those locations where it is needed, and the ability of the Board of Education to embark upon this type of initiative. Thus, we recommend that this idea be more fully explored by representatives of the business community identified by the Board of Education. We believe the business community would have insights into available opportunities, and could work with the Board of Education, the city government, and other relevant groups to initiate business-based programs.

INCREASING THE ROLE OF THE FEDERAL GOVERNMENT

Recommendation 10:

> The Board of Education should seek increased federal funding to respond to enrollment growth.

The federal government has historically supported local educational programs assisting districts with children facing significant educational needs. It has also traditionally supported local educational programs where communities shoulder a disproportionate impact of a national problem. It is the Commission's belief that New York City's current enrollment growth should make the city entitled to additional federal assistance.

While New York City has long accepted and sought to educate a disproportionate share of this nation's immigrant children, the current rate of entry well exceeds the city's ability to respond. Because immigration policy is controlled by the federal government, the city has no ability to control the immigrant inflow at levels consistent with its capacity to handle it.

The federal government has recently enacted the School Facilities Infrastructure Improvement Act, designed to provide grants for school construction, renovation, and repair, committing funding to capital expenditures for local schools, particularly schools with high compensatory education needs. To date, $100 million has been appropriated for this program. These limited funds could be of greater use to New York City if they could be leveraged to

support debt-financing of capital investment. Were the city and the Board of Education free to use these funds to secure debt for school construction, each federal dollar could translate into ten dollars for capital construction. At present, the funds are limited to use in a pay-as-you-go form. Were the legislation changed to allow the funds to act as a direct pledge against which to issue debt, the federal government could provide the city greater up-front funds with which to provide additional school space. The Board of Education should apply for these existing funds and lobby the federal government to increase appropriations for this Act and to authorize a change in the Act to allow for the use of these funds as a direct pledge against which to issue debt for space expansion.

In addition, the federal government funds the Emergency Immigrant Education Program to address the critical needs of recently arrived immigrant students. The Board of Education and the city could benefit from an extension of the timelines for which students are eligible to benefit from these funds, and should lobby to secure this change.

Furthermore, the city has compelling reasons for considering space as a legitimate need for educating immigrant students, as acquiring adequate space to house new immigrant students is a necessary step in educating them. Funds should be made available to help meet these space requirements. California, Texas, Florida, and New Jersey all face similar influxes of immigrant students. Thus, New York State would be allied with important states facing similar challenges as to how to address the educational needs of immigrant children. The Board of Education should lobby the federal government to increase Emergency Immigrant Education Program funds, and to have this increase dedicated to meet space needs created by immigration.

INCREASING THE ROLE OF THE CITY AND THE STATE

Recommendation 11:

> The Board of Education, the City of New York, and the State of New York should provide the New York City public schools a dedicated revenue stream that can be pledged to support debt issuance for increasing school space (i.e. a separate bonding authority).

While the federal government can provide some opportunities for funds to meet future space needs, this responsibility is principally one for local governments. The capital needs of the school system were not adequately addressed under the last two capital plans. While the City's own financial problems make this situation understandable, it remains unacceptable; the rights of children to be educated in appropriate spaces should be addressed distinctly from other capital needs.

SECTION IV

In most municipalities, school spending is isolated from other municipal spending. This, however, is not the case in New York City, where the budgetary priorities of the city's schools regularly compete with the budgetary priorities of other municipal services. In the area of capital budgeting, most other communities in the nation make individual decisions at the ballot box about whether school capital needs merit the provision of additional local resources through bond issues. This isolates for separate consideration how much a community is prepared to invest in the education of its future citizens.

At present, state funds intended to meet basic space needs in New York City's public schools can be and perhaps are being redirected to other needs. If so, this situation shortchanges our children's future.

To remedy this, educational capital funds need to be isolated from other city spending. This is best done by dedicating a revenue stream for school capital expansion and improvement. Furthermore, this revenue stream should be linked to a separate bonding authority for the Board of Education so that it could be leveraged to provide additional debt financing for the schools' capital needs separate from the City's capital budgeting process and without increasing the City's debt obligations, which the City has a limited ability to increase.

To better illustrate the extent of the need, the Commission has endeavored to estimate the amount of funds needed to meet projected enrollment as of the 2002-2003 school year. Were the Board of Education to implement all of the Commission's other recommendations, given the current gap in projected enrollment and anticipated school seats, the Commission estimates that $3.5 billion in new funds would still be necessary to build and lease new school facilities adequate to educate the projected student body. (Appendix D further details this estimation.) While we recognize the magnitude of this expense, we feel that some portion of these funds must be found and expended.

The Board of Education and the city government have in the past considered dedicating a revenue stream for capital acquisition and improvements and issuing debt under a separate bonding authority. These plans considered using incremental increases in State Building Aid funds to New York City—based on changes in the reimbursement formula to more equitably address New York City building costs—as the source of a dedicated revenue stream. Implemented, this creative option would secure some new funds from a reliable source for school capital improvements, without upsetting current city reliance on existing Building Aid.

Various agencies could be used to issue debt and manage the construction financing under this proposal, including the School Construction Authority, the Educational Construction Fund, the Dormitory Authority of the State of New York, the Municipal Assistance Corporation, or an entirely new entity. Any of these options would require a change in the authorizing legislation for the agency in question. Factors to consider in identifying an agency to manage the financing include the amount of management control the Board of Education and the city

should have over the entity, and the potential credibility of the entity in responsibly managing the building program.

Other revenue streams could also be considered, including some form of new impact fees tied to new large housing or business construction. However, this idea presumes a much more robust construction market than currently exists in New York, and would likely prove unfeasible at this time.

Thus, the Commission recommends that the Board of Education be provided a dedicated revenue stream to support school space acquisition, that these funds be used to issue debt, and that the City and the State work cooperatively with the Board of Education to bring about the changes in legislation and current practice to make this possible.

ADDRESSING PROGRAM AND PERSONNEL NEEDS

The overwhelming message of this report is that space is an educational priority, one that must be addressed immediately. Thus, we have recommended ways of finding space to alleviate the overcrowding brought on by the massive influx of newly arrived immigrant students. However, the Commission would be negligent if we ignored the programmatic needs of these students and the personnel necessary to educate them. By our mandate, we are most concerned with the reducing the overcrowding in schools, but we believe that students with special educational needs are particularly affected by the lack of adequate space in our schools. We point to some of these needs below.

Instructional Services

Instructional time must be used differently in educating recently arrived immigrant students, and this, in turn, requires additional space. Because many incoming students arrive in the city without basic literacy, schools must offer additional instruction in the basic subjects. What is more, the Board of Education's recent upgrading of standards in mathematics and the sciences has required schools to upgrade the content of the curricula in these areas for all students, including newly arrived immigrants. For those who enter the city's schools with limited educational backgrounds, the new standards require considerable extra in-class time, exacerbating the strain on both space and instructional services.

Early Childhood Education

Immigration and high birth rates have increased the need for early childhood education for three- to five-year-olds, many of whom are first-generation American citizens, born of

immigrant parents who themselves are often very young and poorly educated. The school system already offers some community-based early childhood programs in all of the districts, often in collaboration with outside agencies; however, schools and teachers are not able to offer adequate services in the school buildings because there is little space there for pre-kindergarten—or even kindergarten—programs.

Bilingual Education and English as a Second Language

The city's schools already offer programs in bilingual education and English as a Second Language (ESL), and provide non-instructional services to recently arrived immigrant students and their families. However, the magnitude and variety of programs and services required in the future will demand more commitment, more resources, more ingenuity, and more space.

The space constraints facing the general instructional programs are often even more acute in bilingual, ESL, or immigrant programs. Classes in these programs need to be small so that students can receive the individual attention they need. Currently, in some schools, these classes are permanently relegated to peripheral spaces such as closets or locker rooms because they are considered out-of-the-ordinary instruction for special students.

Instructional Personnel

There are not enough well-trained, licensed staff to teach the large numbers of incoming immigrant students. To begin to meet this need, the Board of Education has instituted a number of recruitment programs to offer incentives to college students who wish to enter teaching. The Board also provides various temporary licenses to ESL or bilingual education teachers. But there are neither enough teachers nor sufficient incentives, particularly in shortage areas such as bilingual early childhood, special education, and vocational and technical education. In addition, there are nearly chronic shortages of teachers in these areas in some of those districts that are the most impacted by increased immigration. But as we hire more teachers we will find that they require more functional space for instruction and the storage of teaching materials.

Non-Instructional Services

Recently arrived immigrant students and their families require non-instructional services beyond those typically offered by schools. For the most part, State and Federal formulas for reimbursing the schools on a per-pupil basis pay for these services. However, when students remain in the schools for a sustained period of time, they often no longer qualify for these services, and the schools lose a portion of the funding for programs. Currently, many of these

student services are considered expendable, although the ability of immigrant students to profit from academic course work depends on them. Sometimes the services are provided away from the schools themselves because there is simply not enough space for them within the building. To provide them—particularly health and family social services—schools often collaborate with local public and private service agencies. Although these agencies can supplement the missing program resources, many educators feel that all student services should be provided within the school building, or at least proximate to it, rather than away from the school.

IMPLEMENTATION

The Commission recognizes that the discussion of how to address enrollment growth in the New York City public schools has been ongoing. In the past, a number of the remedies we prescribe have been raised and discussed, but they have rarely been implemented vigorously and completely. This Commission strongly stands behind the above recommendations and believes that their immediate implementation is essential to avert a future crisis.

Thus, the Commission requests that the Chancellor and Board of Education within 90 days provide a detailed public response to this Commission's recommendations. The response should articulate which recommendations the Board will implement, how and when they will be implemented, and which recommendations it will not implement and why. The Commission further requests that the Board of Education share this Commission's report with the other local, state, and national entities that we have indicated should play a role in addressing enrollment growth. These entities should also be asked to provide a public response to these recommendations.

Furthermore, the Commission urges the Chancellor and the Board of Education to form an oversight body charged to prioritize, monitor, and report progress towards implementation of the recommendations of this report to the Chancellor, the Board of Education, and the general public at regular scheduled intervals. Such a body should be comprised, at a minimum, of a representative of the Board of Education's Division of School Facilities, a representative from among the Community School District Superintendents, a representative of the city government, and other relevant internal and external parties.

We believe that these recommendations and this oversight mechanism, when implemented with the cooperation and dedication of the people of the school system and the broader community, can best address the future needs of our city's children.

SECTION V

MEMBERS OF THE CITIZENS' COMMISSION ON PLANNING FOR ENROLLMENT GROWTH

Mr. P. Michael Timpane - Co-Chairman
Professor and Former President
Teachers College, Columbia University

Dr. Ricardo R. Fernandez - Co-Chairman
President
Lehman College

Ms. Keishea Allen
Student
South Shore High School

Ms. Jan Atwell
Chairperson
Educational Priorities Panel

Mr. Daniel Biederman
President
Grand Central Partnership

Mr. John Caiazzo
Vice President for Construction
Olympia & York

Mr. Jerry Cammarata
Member - Community School Board No. 31

Mr. Geoffrey Canada
Executive Director
Rheedlen Centers for Children & Families

Dr. Angela Carrasquillo
Director - Teachers of English to Speakers of Other Languages
Fordham University

Ms. Chiara Coletti
Vice President of Public Affairs
New York Newsday and Newsday

Mr. Ezra Ehrenkrantz, FAIA
Principal
Ehrenkrantz & Eckstut Architects

Ms. Ramona Hernandez
Instructor - Social Science Department
Fiorello H. La Guardia Community College

Ms. Bonnie Impagliazzo
Assistant to Brooklyn Borough President
Howard Golden
Office of the Brooklyn Borough President

Ms. Patricia Kobetts
Principal
John Bowne High School

Ms. Emma E. Macari
Vice-Chancellor for Facilities, Planning, Construction & Management
City University of New York

Mr. Edward T. Marshall
President
ETM & Associates

Ms. Graceann Morawek
Teacher
Paulo Intermediate School

SECTION V

Mr. Joshua Muss
President
Muss Development Company
[Mr. Muss wishes to express his reservations about the discussion of Addressing Program and Personnel Needs]

Ms. Raseh Nagi
Community School District Superintendent
District 28

Mr. Cao K. 0
Executive Director
Asian American Federation of New York

Mr. Joseph Pacheco
Puerto Rican/Latino Educational Roundtable

Mr. Jerald Posman
President
Ellis Paxxon Health Services

Mr. David Sherman
Vice President
United Federation of Teachers

Ms. Hildy Simmons
Managing Director
J.P. Morgan & Co. Incorporated

Mr. Donald Singer
President
Council of Supervisors and Administrators

Ms. Lois Voyticky
PTA President
P721R

The Honorable Priscilla Wooten
Chairperson
City Council Education Committee

Mr. Alfonso Wyatt
Fund for the City of New York

VOLUME TWO

APPENDIXES

ENROLLMENT GROWTH IN NEW YORK CITY

Reversing a downward trend which reduced enrollments by close to 200,000 between 1972 and 1982, the number of students registered in New York City public schools has boomed during the last decade. In October 1982, 918,384 students were enrolled in New York City public schools. Eleven years later, in October 1993, enrollment reached 1,016,000, exceeding the one million mark for the first time since the 1977-1978 school year.

This rise in student rolls has accelerated during the last five or six years, as *Figure A1* shows. From October 1988 to October 1993, student enrollment grew by close to 80,000 students, an increase exceeding the *total* public school enrollment in many large cities such as Atlanta, Boston, or Newark. At the present time, enrollment is rising at a rate of 20,000 to 25,000 additional students each year, equivalent to the size of a school district.

This rapid growth began with rising elementary school registers during the 1983-84 school year. As these students advanced from grade to grade, the growth surfaced in the intermediate schools in 1987-88, and began to affect the high schools in the 1990-91 school year. Currently, enrollment growth is occurring at all grade levels, although high schools and elementary schools have been the most seriously impacted. Between October 1992 and October 1993, for example, the number of students enrolled in high schools rose by 9,245, constituting a 3.2 percent growth of the high school population during that year. By comparison, during the same year, elementary schools grew by 8,644 students a 1.7 percent increase. In intermediate schools, enrollment grew by 2,684, or by 1.4 percent. The total enrollment growth in this period when students in special education schools are added amounted to 22,197 students, constituting a 2.2 percent increase.

As *Table A1* shows, Queens has clearly been the most affected by enrollment growth, with an increase of over 21,000 additional students during the last four years. All of Queens' school districts have faced enrollment growth and some have exhibited a virtual tide of new students. However, all of the city's boroughs have been affected by rising student rolls to some extent or another.

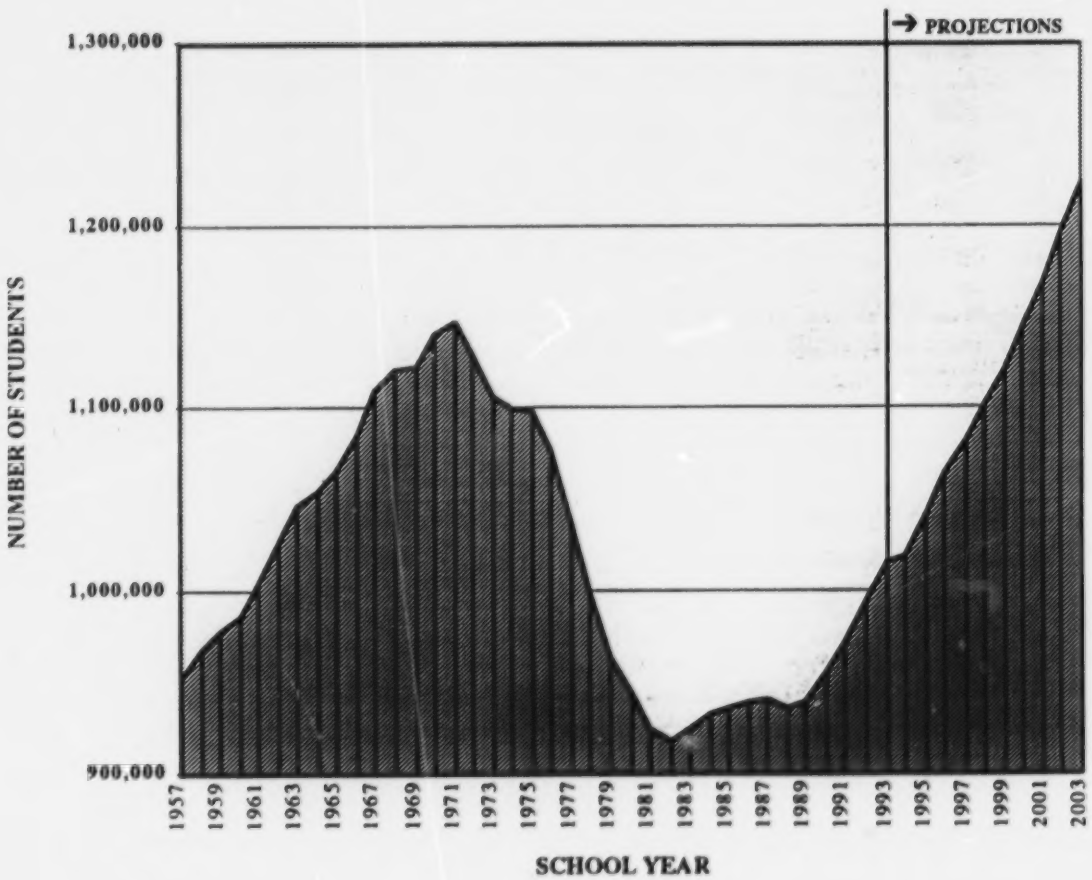
TABLE A1
ENROLLMENT GROWTH, BY NEW YORK CITY BOROUGH
Ranked by Absolute Increase in Enrollment, 1988-1992

Borough	1988-1989 Enrollment	1992-93 Enrollment	Change in Enrollment	Enrollment Growth (%)
Queens	**215,602**	**237,271**	**21,669**	**10.1%**
Bronx	**187,255**	**195,885**	**8,630**	**4.6%**
Brooklyn	**315,580**	**323,118**	**7,538**	**2.4%**
Manhattan	**136,441**	**143,465**	**7,024**	**5.1%**
Staten Island	**44,843**	**48,679**	**3,836**	**8.5%**

Source: *New York City School Profile Data*, School Policy Analysis Section, Office of Educational Research, Division of Strategic Planning, New York City Board of Education, 1992 and 1993.

FIGURE A-1

Enrollment Growth In New York City Public Schools 1957-2003



Source: Data for 1957-1993 is from NYC Board of Education, Office of Student Information Services. Figures for 1994-2003 are projections based on The Grier Partnership Enrollment Projections: NYC Public Schools.

WHY THE ENROLLMENT GROWTH?

What explains the rising tide of students entering New York City public schools? The expansion is closely linked to changing demographics. After a decade of reductions in population, the 1980s represented a period of net population gain for the city, with an increase from 7,071,639 persons counted by the Census of Population in 1980 to 7,322,564 in 1990.

This expansion has been fueled by an increased settling of immigrants in the area, with close to one million immigrants from over 160 countries locating in the city during this period, an influx that continues into the 1990s. In 1992 alone, it is estimated that 120,600 legal immigrants located in New York City. More than ever before, this immigrant flow has made the city a highly complex mosaic of diverse populations, many new to the American demographic scene.

These immigrants tend to be young compared to the general population, and a greater proportion of them have school-age children, mostly in public schools. How many immigrant children are there in the schools? Estimates of the number of immigrant students in New York City in recent years are presented in *Figure A2*. The data in this figure are based on the New York City Board of Education's Emergency Immigrant Education Census, and—since only recent immigrants are eligible for Emergency Immigrant Education Assistance[1]—constitute a low estimate of the actual number of immigrant children in the public schools.

As *Figure A2* indicates, the number of recent immigrant students in New York City public schools more than tripled between October 1989 and October 1992, growing from 36,000 to 124,827. This constitutes about 12 percent of the total enrollment in the school system, up from less than 5 percent in October 1989. However, the percentage of all immigrants (including those covered by the Emergency Immigrant Education Assistance plus others) is much higher; according to the 1990 Census, as many as 22 percent of the student population enrolled in New York City public schools were foreign-born.

While total enrollment in New York City public schools grew by 76,000 students between October 1989 and October 1993, during the same period, at least 88,827 immigrant students entered the system. Thus, immigrants account for all of the enrollment growth in recent years. Furthermore, non-immigrants exhibited a net *reduction* in their enrollment in New York City public schools, decreasing by at least 12,227 students between 1989 and 1993.

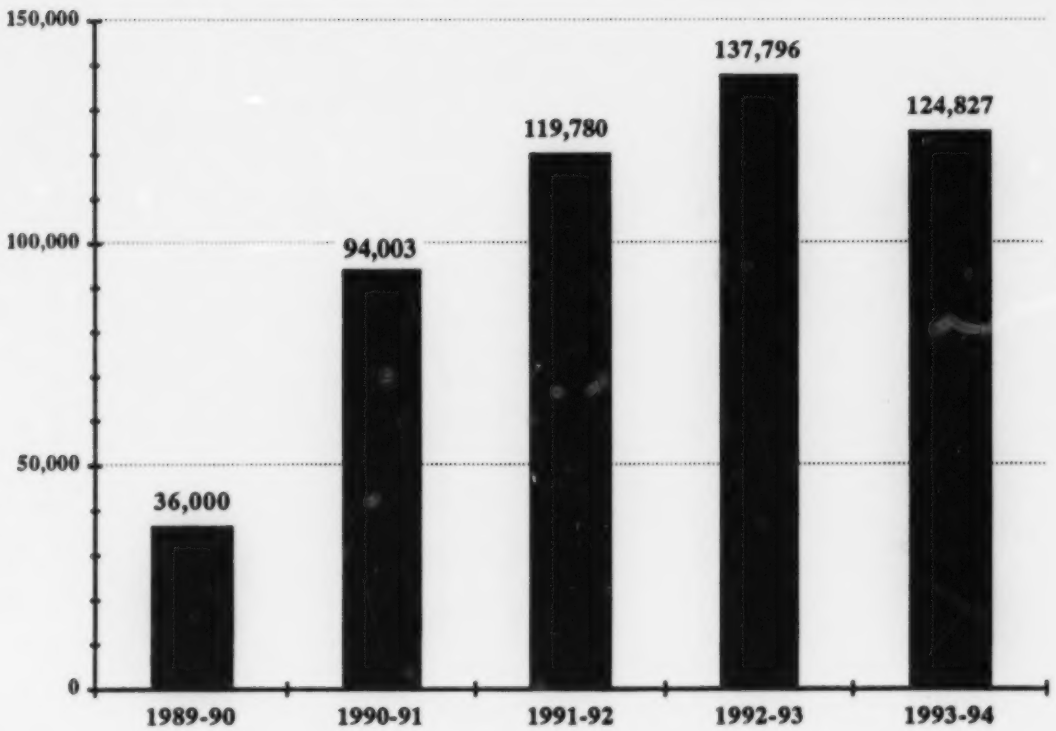
Enrollment growth in New York City schools is being compounded by city birth rates, which rose rapidly during the 1980s; as *Figure A3* shows, births increased from about 100,000 per year in 1980, to more than 120,000 per year in 1988, a rate that has continued through the early 1990s. As these children have grown to school age, and have moved through the schools, they have helped swell the enrollment rolls.

---

[1] The Emergency Immigrant Education Act is one of the few federally-funded programs available specifically to immigrant students. However, only students who have been enrolled in U.S. schools for three years or less are eligible. In addition, in order for a school district to qualify for funding, at least 3 percent of its total enrollment (or otherwise 500 students) must be immigrant children.

FIGURE A-2

Number Of Immigrant Students In New York City Public Schools* 1989-90 to 1993-94



* These are lower-bound estimates, based on the number of immigrant students eligible for Emergency Immigrant Education Assistance.

Source: *Emergency Immigrant Education Census*, March 1994, Office of Educational Data Services, New York City Public Schools; Chancellor's Budget request for 1994-95, Board of Education of New York City.

WILL ENROLLMENT GROWTH CONTINUE?

The trends outlined above are not subsiding. The rising public school student population can thus be expected to continue in the foreseeable future. But by how much?

Table A2 shows the latest available projections of enrollment growth.[2] According to these projections, the combined elementary and intermediate school enrollment in New York City public schools will rise from 689,109 students in October 1992 to 772,200 by 1997, an average increase of about 16,000 pupils per year. At the high school level, enrollment will rise from 283,810 in October 1992 to 324,396 in October 1997, an annual average increase of 8,117 pupils. Further growth is foreseen for the year 2003, with a total enrollment of 1,250,000 students projected at all levels.

If these projections are realized, the New York City public school system faces a daunting agenda over the next few years. Indeed, the prospects of absorbing close to 125,000 new students in a period of five years should be a matter of serious concern for the school system. The consequences may be devastating.

TABLE A2
ENROLLMENT PROJECTIONS, 1997 and 2002
Projections made in August 1991

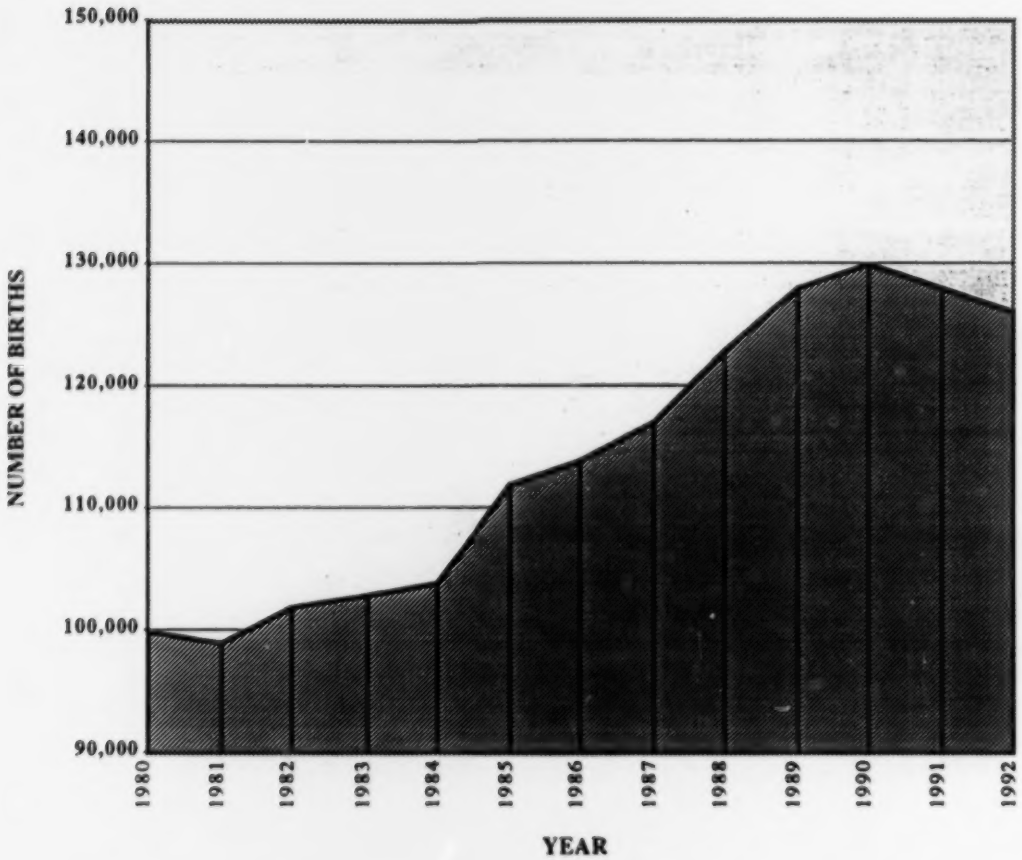
Level	Year	Projected Enrollment
Elementary and Middle Schools	**October 1992 (actual)**	**689,109**
	October 1997	**772,200**
	October 2002	**875,367**
High Schools	**October 1992 (actual)**	**283,810**
	October 1997	**324,396**
	October 2002	**370,972**

Source: The Grier Partnership, Enrollment Projections 1991 to 2000: New York City Public Schools, Bethesda, Maryland, August 1991.

[2] A group of demographers, The Grier Partnership, has supplied the Board of Education with short-term and long-term projections of student enrollments for New York City's public schools. Alternative projections exist. For instance, the City's Department of City Planning furnishes projections on elementary and middle school enrollment for the 32 community school districts in New York City. The City's Office of Management and Budget and the State Education Department also makes projections of overall enrollment for the New York City public school system. All of the forecasts predict substantial enrollment growth both in the short-run and in the long-run. The Commission's examination of the alternative projections suggests that The Grier Partnership projections constitute the most comprehensive and accurate forecast of the short-run enrollment growth in the public school system. An analysis of the accuracy of the forecasts and their methodologies is examined in *Appendix B*. The projections quoted in this report are the latest supplied by The Grier Partnership. The Partnership computes projected upper and lower bounds on future enrollment as well as a midpoint forecast. The Report focuses on the midpoint projections.

FIGURE A-3

Trend In Birth Rates
New York City, 1980-1992



Source: NYC Department of Health,
The Grier Partnership.

THE IMPACT OF ENROLLMENT GROWTH: OVERCROWDED, OVERBURDENED SCHOOLS

The most direct impact of enrollment growth on a school system occurs through overcrowding, defined as the extent to which a school system's student population exceeds its capacity. Whether New York City's recent enrollment growth has caused overcrowding is related to the degree to which (1) the school system was originally operating at excess capacity in the mid-1980s when the enrollment growth started to pick up, and (2) whether there has been a net expansion of capacity through modernization, additional buildings, etc.

Both of these apply. As enrollment has grown, schools which were previously underutilized are rapidly reaching full utilization or are even being overutilized. For instance, the Springfield Gardens High School in Queens had a capacity to hold 2,424 students in 1989.[3] In October 1989, the enrollment at the school was equal to 2,291 students, constituting a 94.5 percent utilization rate. By October 1992, Springfield Gardens enrolled 2,630 students, with a utilization rate of 111 percent.

In addition to greater utilization of existing capacity, additional students have been absorbed through increased capacity, such as through construction of new school buildings. Since 1988, the School Construction Authority has completed 8 mini-schools, 10 new schools, 4 building additions and 12 school modernizations. These have added 16,960 additional seats to the system over the last five years. An additional 29,617 seats are in construction at the present time as part of the system's Five-year Capital Plan.

Figure A4 illustrates the various methods through which the school system has absorbed increased enrollments, showing how it has accommodated the 21,728 new students who enrolled in the 1993-94 school year. Overwhelmingly, the system relied on the more intensive use of existing facilities, accommodating 8,523 new students in this way. The second most common method was through the use of leased facilities, which provided 4,860 seats. This was followed by the construction of new schools, which added 4,850 new seats, and by the use of modernization and additions, which added 2,055 new seats. Finally, the reorganization of space within existing facilities—including moving administrative offices out of schools—allowed the system to add 1,444 seats.

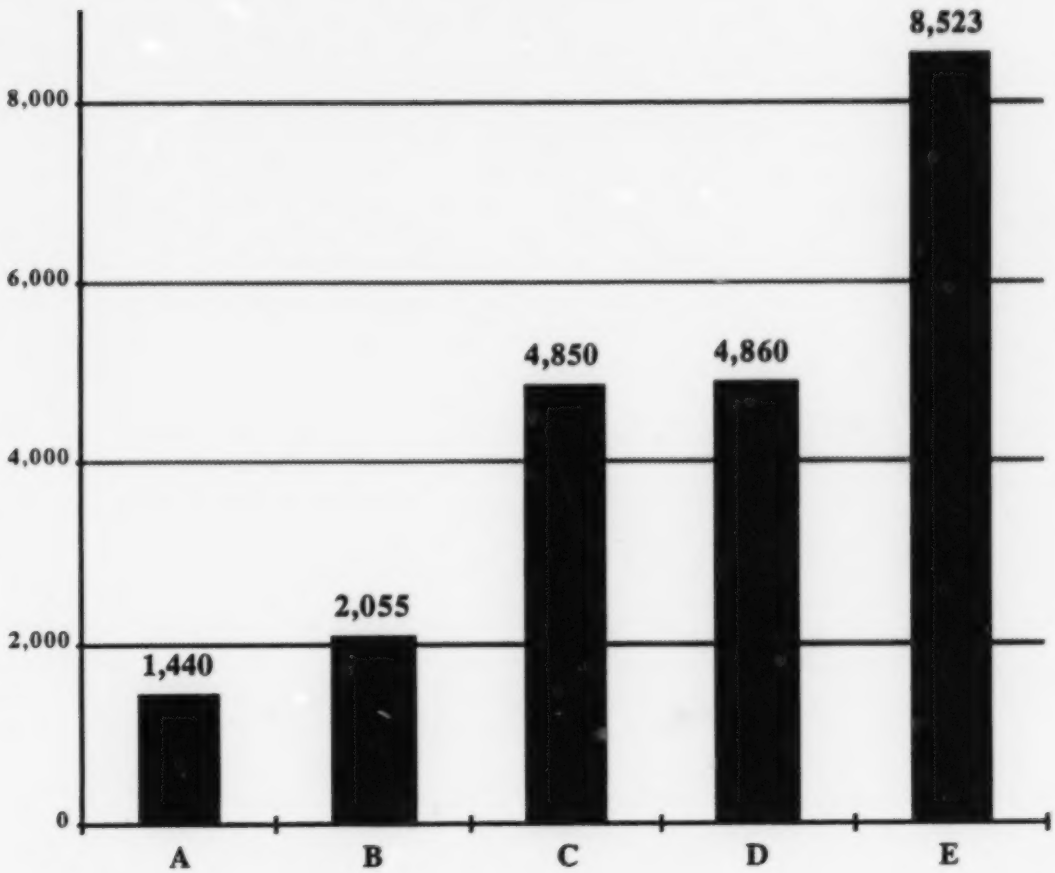
Despite these efforts to create new space, five years of solid enrollment growth have brought the public school system closer and closer to the limit of its ability to absorb new students; the system's maximum capacity is being reached very quickly.

---

[3] The student capacity of a building varies depending on a number of variables, including the number of special education classrooms, the number of special equipment rooms, seminar rooms, rooms out of service due to construction, damage or alternative uses, etc. *Appendix C* examines in detail how capacity formulas are established.

FIGURE A-4

Accommodation Of Increased Enrollment New York City Public School 1993-94



ALTERNATIVES FOR ACCOMMODATING NEW STUDENTS:

A. Reorganization of Space within Existing Buildings.
B. Additions and Modernizations.
C. Newly-Constructed Schools.
D. Leasing Program.
E. Other/More Intensive Use of Existing Capacity.

Source: New York City Board of Education, *Annual Report, 1993-94*, p.30.

The problem has been further compounded by the growth of New York City's special education enrollments over the two decades since Congress voted to assure educational equality for the disabled. While the system enrolled 34,000 special education students in 1974, it now enrolls 130,037. *Figure A5* outlines the marked acceleration in the number of special education students since the late 1980s. In part, this boom is related to broadened definitions of disabilities. However, it has also been correlated to the use (or misuse) of special education as a dumping ground for unruly students or for children who do not fit the mold (whether because of language, culture, and so on).

The growth of the special education population critically affects the usage of space in schools, particularly because special education classes have significantly smaller numbers of students than regular classes; compared to between 25 to 35 students in regular classes (depending on the school level), special education classes house between 6 and 12 students, often in rooms designed for many more students.

Another significant issue relating to school overcrowding is the variability of enrollment growth across districts, which has resulted in a number of districts where schools are severely overutilized coexisting with districts in other areas where capacity is comparatively low. In October 1992, for instance, the most overcrowded school in New York City was Public School 215 Annex in District 27 in Queens, which operated at 305 percent of capacity. At the same time, the least utilized school was Intermediate School 98 in District 12 in the Bronx, at 20 percent of capacity.

Nevertheless, the number of underutilized schools is rapidly shrinking. In 1992-93, 52 percent of all elementary school buildings were at a capacity of 100 percent or more. In many districts—such as District 6 in Manhattan and most districts in Queens—virtually all elementary schools are currently overutilized. *Table A3* shows list of the City's most utilized school buildings in October 1993. As it shows, the most utilized elementary school building at that time was PS 886 in District 10 in the Bronx, at 247 percent of capacity. Among intermediate schools, the extent of overcrowding is not as dramatic as at other levels. Only 28 percent of all intermediate school buildings were operating at 100 percent or more of capacity in 1993. IS 145 in District 30 in Queens was the most overutilized, with a 150 percent utilization rate. The high school system is the most overcrowded of the New York City public schools, with 82 percent of all high school buildings utilized at 100 percent of capacity or higher in 1992-93. The John Jay school in Brooklyn was the most overcrowded high school building in the City in 1992-93, with a 174 percent rate of utilization.

FIGURE A-5

The Recent Growth Of The Special Education Student Population

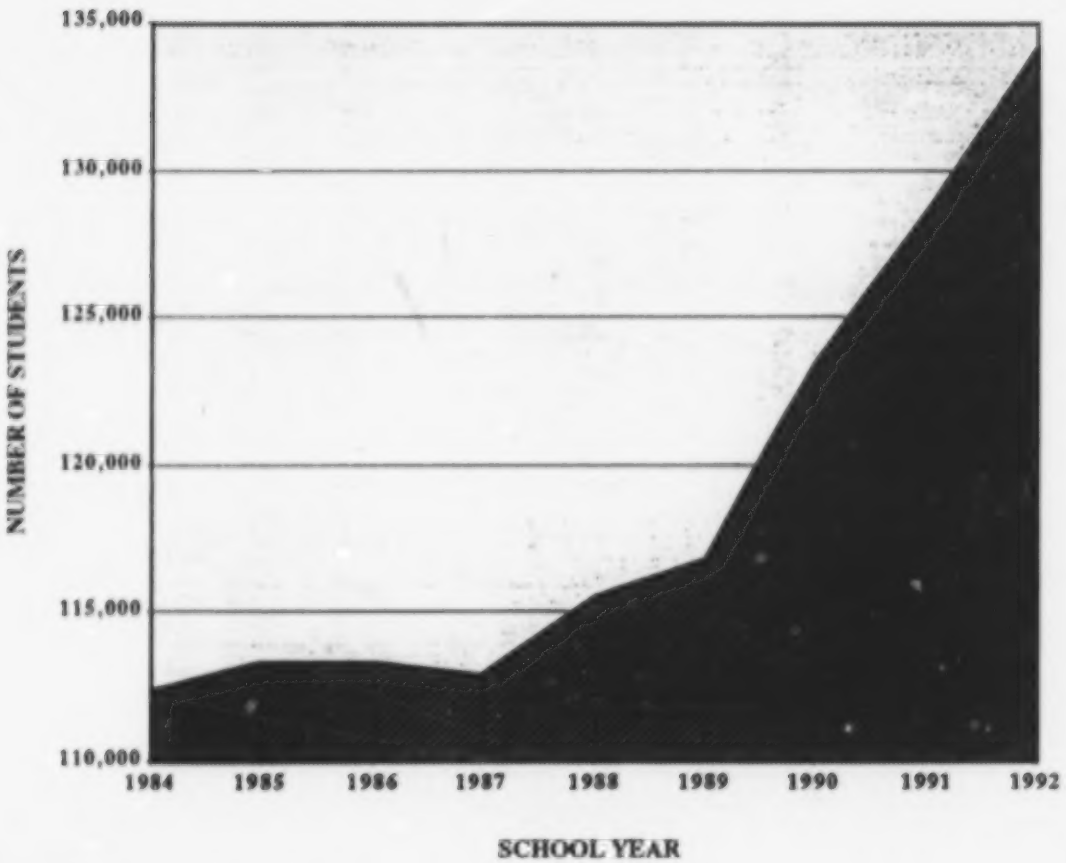


TABLE A3
TOP TEN LIST OF MOST OVERCROWDED SCHOOL BUILDINGS, NEW YORK CITY, 1992-93

Borough/District	School Name	Utilization Rate (%)
ELEMENTARY SCHOOLS		
Bronx, 10	PS 86, Kingsbridge Heights	247
Queens, 27	PS 215, Lucretia Mott	226
Queens, 28	PS 55, Maure	214
Brooklyn, 19	PS 65, Little Red School	210
Brooklyn, 14	PS 319	206
Bronx, 10	PS 291	198
Bronx, 9	PS 236, Langston Hughes	189
Bronx, 10	PS 95, Van Courtlandt	186
Manhattan, 6	PS 115, Alexander Humboldt	185
Bronx, 10	PS 56, Norwood Heights	184
INTERMEDIATE SCHOOLS		
Staten Island, 30	IS 145, Joseph Pulitzer	150
Bronx, 10	IS 80, Mosholu Parkway	141
Brooklyn, 20	IS 259, William McKinley	140
Bronx, 10	IS 143	139
Staten Island, 30	IS 10, Horace Greeley	136
Queens, 24	IS 73, Rafael Cordero y Molina	136
Bronx, 8	IS 123, James M. Kieran	131
Queens, 24	IS 61, Leonardo DaVinci	130
Manhattan, 6	IS 164, Edward W. Stitt	123
Queens, 24	IS 119, Glendale	121
HIGH SCHOOLS		
Brooklyn	John Jay	174
Brooklyn	Fort Hamilton	169
Queens	Townsend Harris	169
Brooklyn	Bushwick	157
Manhattan	George Washington	153
Queens	Francis Lewis	152
Queens	Queens Vocational	152
Bronx	University Heights	151
Bronx	Morris	147
Queens	Newtown	147

Source: *New York City School Profile Data*, School Policy Analysis Section, Office of Educational Research, Division of Strategic Planning, New York City Board of Education, 1992 and 1993.

THE PROGRAMMATIC CONSEQUENCES OF ENROLLMENT GROWTH

Enrollment growth has a number of major programmatic implications. One of them relates to the massive expansion in the number of immigrant children enrolled in public schools. As significant as this expansion has been, even more remarkable is the diversity in the countries of origin of the new students. These include the Dominican Republic, Russia and the former Soviet Union, Jamaica, China, Guyana, Haiti, Mexico, Trinidad & Tobago, Ecuador and Colombia.

The cultural and linguistic diversity represented by students from these countries is astounding (there are approximately 120 different languages spoken by immigrant children in New York City schools). As a consequence, the number of Limited-English-Proficient (LEP) students has increased sharply. In October of 1988, there were 94,839 LEP students in the public school system; by October 1993, this number had risen to 154,529 students.

The staff needs required to sustain a growing enrollment of LEP students, without raising student-to-teacher ratios, are growing rapidly. In some schools in the city, teachers confront students from as many as 45 different countries who use at home almost as many different languages. The system has approximately 5,000 bilingual education and ESL teachers, out of a staff of close to 67,000 teachers. As the number of LEP students rises, the need to recruit and retain more of these teachers will become unavoidable.

A SYSTEM AT RISK: OVERCROWDING AND THE QUALITY OF LIFE IN SCHOOLS

The negative educational impact of absorbing further enrollment growth through increased capacity utilization or increased class size is likely to be strong. The connection between overcrowding, increased class size and student educational outcomes (such as student achievement) has been a matter of research for many years. The evidence on the issue is not conclusive and the topic remains under intensive investigation. However, in a study conducted by this Commission, we found that in New York City the lowest income students in overcrowded schools have lower test scores than their counterparts in other schools. The Commission has two additional key points to make in this regard. First, individualized, longitudinal data allowing for the study of the impact of overcrowding or class size on individual students over time is lacking.[4] Second, the relevance of existing research on the issue to the current problems of New York City schools may be drawing thin. None of the research has in fact considered schools with the serious overcrowding situation now facing many schools in New York City.

[4] In fact, educational researchers who have followed careful, longitudinal studies have found significant negative effects of increased class size on student achievement. See Helen Pate-Bain, C. M. Achilles, J. Boyd-Zaharias and B. McKenna, "Class Size Does Make a Difference," *Phi Delta Kappan*, November 1992.

The overcrowding in many parts of the City is now reaching crisis proportions. Class space is scarce in these schools and teachers are sometimes forced (especially early in the school year) to use bathrooms, closets and staircases as classrooms.

To investigate the consequences of enrollment growth and overcrowding in the schools, the Commission carried out a study of four overcrowded schools in the New York City public school system. The schools were randomly selected among a group of overcrowded schools. All of them were operating above the 130% utilization rate. Their location was selected to reflect the diversity in experience within the City. It included schools in the Bronx, Manhattan and Queens. There was also variability by level, with elementary and high schools both included in the analysis. Students, teachers and administrative staff were interviewed, facilities were visited and studied, and questionnaires were distributed to students and teachers.

Table A4 reports the reactions of students in the schools studied by the Commission on the overcrowding situation in their schools and its consequences. A total of 62.6 percent of all children surveyed felt that the number of students in their school was too large. Almost 80 percent also said that there were too many students in their classrooms. It is significant that nearly half of the students surveyed reported that their assignments were not checked daily; nor were they able to participate in class discussions or special projects. Although some students could still find places to study quietly in school in spite of the overcrowding, over 40 percent said they could not find such a place if they wanted to. In a reflection of what children feel about the overall quality of life in these schools, almost half of the non-graduating students surveyed do not look forward to spending the day in the school and do not want to return next year. This was in spite of the fact that the overwhelming majority responded that they had "a lot of friends" in their school.

Teachers in overcrowded schools also are deeply disturbed by the situation. *Table A5* presents the reactions of teachers in the schools sampled by the Commission's study. Teachers were asked to rank in importance a number of items they felt should be addressed in the school. The three most important items were: student overcrowding (with 88 percent of teachers indicating that this was a very important issue), the need for adequate classroom space (87 percent), and staff stress management related to overcrowding (62 percent). It is significant that, for the teachers, overcrowding and lack of space were more important than other issues such as sanitation, the need for more administrative personnel, maintenance, and violence.

Table A5 also shows that teachers feel very strongly that overcrowding is affecting the conditions of both teachers and students in their school. More than 70 percent of the teachers reported that overcrowding affects a lot classroom activities, instructional techniques and student achievement. More than 70 percent also felt that the administration of daily activities has been seriously impacted by overcrowding, leading to staff burnout. Many also reported engaging in cooperative efforts to deal with overcrowding, continually learning and seeking

new ideas to deal with the problem. Taking everything into consideration, only about 50 percent of all the teachers sampled looked forward to each working day in their school. The remainder either didn't look forward to working in the school each day or were indifferent to the whole thing.

The Commission's analysis of a sample of New York City's overcrowded schools suggests that overcrowding is viewed by both teachers and students as an extremely serious issue, perhaps the most important problem confronting them. They feel overwhelmed, discouraged and often disgusted with the space shortage and its consequences for learning. We can only conclude that the scars left by an absence of planning for enrollment growth in the coming years may be deep in the minds and spirits of the new New Yorkers entering the public school system.

TABLE A4
NEW YORK CITY SCHOOL CHILDREN SPEAK ON OVERCROWDING

Question	Distribution of Responses (%)		Distribution of Responses (%)
1. The number of students in my school is:			
Too small	1.2%	O.K.	35.7%
Too large	62.6%	No answer	0.5%
2. I feel that in most of my classes there are:			
Too many students in the classrooms			48.9%
Just enough students in the classrooms			33.7%
Too few students in the classroom			4.0%
I have no opinion			12.9%
No answer			0.5%
3. Is there a place in school where you can sit quietly to study if you wanted to?			
Yes	38.9%	No	43.9%
Don't know	16.2%	No answer	1.0%
4. Would you like to study in this school next year?			
Yes	41.9%	No	35.5%
Don't know	21.5%	No answer	1.5%
5. Do you have a lot of friends here?			
Yes	88.3%	No	7.2%
Don't know	3.7%	No answer	0.8%

Based on 599 responses of students in overcrowded New York City public schools.

Source: *A Study of the Consequences of Overcrowding in New York City Schools*, Institute for Urban and Minority Education, Teachers College, Columbia University, 1995.

TABLE A5
NEW YORK CITY PUBLIC SCHOOL TEACHERS SPEAK ABOUT OVERCROWDING

I. Ranking of importance of items that need to be addressed in this school this year:

Item	Percentage who indicate item is very important
Student Overcrowding	87.8%
Need for adequate classroom space	87.3%
Staff stress management related to overcrowding	62.0%
Availability of classroom resources and/or materials	52.1%
Maintenance/sanitation	49.3%
Student/teacher interaction	42.7%
Noise levels around school	39.4%
Physical fights between students	29.6%
Need for additional administrative personnel	17.4%

II. Ranking of importance of factors that need to be addressed in this school:

Factor	Percentage who indicate item is very important
Classroom space	82.2%
Need of instructional materials	54.0%
Discipline climate	51.2%
Stress Management because of overcrowding	48.8%
Hiring more teaching staff	44.6%
Budget	41.3%
Sanitation	41.3%
General policy	36.6%
Teaching Methods	30.0%
Curriculum	29.6%
Need for more administrative personnel	13.6%

III In your opinion, how much has overcrowding affected the following areas within the school?

	A lot	Some	Not at all	Don't know/Blank
School physical structure	75.6%	15.1%	2.3%	7.0%
Classroom activities	75.1%	16.9%	1.9%	6.1%
Staff burnout	74.2%	16.9%	2.8%	6.1%
Administration of daily activities	73.2%	18.3%	2.8%	5.6%
Student achievement	70.9%	21.1%	1.4%	6.6%
Instructional techniques	70.4%	22.5%	1.4%	5.7%
Student behavior	67.6%	25.9%	3.3%	3.3%
Staff development	40.2%	36.1%	14.4%	9.3%
Noise levels	42.3%	33.8%	16.4%	7.5%

Based on 213 responses of school teachers in overcrowded New York City public schools.

Source: *A Study of the Consequences of Overcrowding in New York City Schools*, Institute for Urban and Minority Education, Teachers College, Columbia University, 1995.

APPENDIX B.

COMPARISON OF THE ACCURACY OF BOARD OF EDUCATION AND DEPARTMENT OF CITY PLANNING PROJECTIONS

The New York City Department of City Planning (DCP) and the Board of Education (BOE) have projected public school enrollments in New York City for many years. The DCP has traditionally focused on long-term enrollment forecasts while the BOE has been more concerned with short-term projections. In the late 1980s, shifting demographic trends in New York City resulted in a sudden increase in the number of students enrolled in the public school system. Neither the DCP nor the BOE were able to predict the enrollment growth. Both sets of forecasts under-estimated the extent of the enrollment increases.

As a result of this experience, in 1988, the BOE, as part of its Capital Task Force, asked outside consultants to evaluate the methodology used by the DCP and BOE in projecting enrollment and in analyzing demographic trends in New York City to assess the potential magnitude of future enrollments. This review concluded that the methodology used to project enrollments by the BOE was the appropriate one in principle, but that it needed to be modified in a way which would make it sensitive to the sudden changes that occur in New York City's population so that future projections would not seriously under- or over-estimate actual future enrollments.[1] It was recommended that the BOE use more recent sources of New York City population data and the timely delivery of birth data by the New York City Health Department. It was further recommended that demographic differences among the main racial and ethnic groups in the City be used in computing an alternate set of enrollment projections (an "ethnically derived" projection). Not including these idiosyncratic elements in the projection formula was largely the reason why the school system was unable to predict future enrollments within some reasonable margin of error, of course.

These recommendations were adopted by the BOE. On this basis, a group of demographers, The Grier Partnership, was commissioned in 1988, and in subsequent years, to project enrollments for New York City's public schools. The projections are calculated using variants of the so-called *cohort survival method*. This method attempts to simulate the way in which future pupils will enter, leave and move through the system, based upon actual data on past student populations in the same school system. The method incorporates the major factors that are likely to affect enrollments, such as birth rates, migration, transfers, holdbacks, and so on. At its greatest level of detail, projections are supplied on changes in enrollment ten years into the future, disaggregated for the 32 community school districts and for four major racial and ethnic groups (Hispanics, Black non-Hispanics, White non-Hispanics, and Other non-Hispanics).

---

[1] See The Grier Partnership, *No Easy Answers: An Analysis of Enrollment Projections for New York City Public School and Recommendations for Improvement*, Bethesda, Maryland, August 1988.

APPENDIX B.

The Commission examined the recent projections made by the Grier Partnership and has found them to be quite accurate for the projected year closest to when the forecast was made. This is illustrated through the use of *Table B1*, which shows the projected enrollments made by The Grier Partnership in August 1991 versus the actual enrollments for October 1991, 1992 and 1993. For both elementary/middle and high schools, the forecast error —the difference between the actual and the projected enrollments— was close to only 1,000 students. Elementary and middle school projections generally exceeded the actual enrollments while for high schools, there was an underestimate of the enrollment growth. The farther in the future the projection was applied to, the larger the forecast error. Although the confidence of the short-term forecasts used by the BOE is high, the long-term projections should be taken with greater skepticism.

Given the comparatively greater error involved in long-term projections of enrollment growth, it might be wise to consider alternative forecasts, other than The Grier Partnership forecasts used by the BOE, to get a better picture of the overall view of forecasters regarding enrollment growth. For instance, the Department of City Planning continues to furnish projections on elementary and middle school enrollment for the 32 community school districts in New York City. In addition, the City's Office of Management and Budget and the State Education Department make projections of overall enrollment for the New York City public school system. All of the forecasts predict substantial enrollment growth both in the short-run and in the long-run. There is, however, considerable variability in the range of estimates of future growth. The City's Office of Management and Budget, for instance, projects that, from 1992 to 1996 a total of 76,000 new students will enter the school system. The Board of Education uses projections which indicate that the growth during this same time period will be equal to 98,374 students.

Table B2 compares the forecasts of enrollment growth for 1997 and 2002 calculated by The Grier Partnership, the Department of City Planning, and the State Education Department. For elementary and middle schools, the Board of Education projections are that the number of students enrolled will rise by 83,093 in the five year period between 1992 and 1997 and by 186,258 students in the decade from 1992 to 2002. The projections of the Department of City Planning are more conservative. They predict that between 1992 and 1997 the enrollment of elementary and middle schools will rise by 66,298, and that between 1992 and 2002 the register rolls will increase by 107,093 students. With respect to total enrollment growth in the New York City school system, the Board of Education projects that enrollment will rise by 123,679 in the five year window between 1992 and 1997 and by 273,420 students between 1992 and 2002. The estimates of the State Department of Education are again more conservative than those used by the BOE. Between 1992 and 1997, the State department projects that total enrollment in New York public schools will rise by 120,164, while between 1992 to 2002 enrollment is expected to increase by 186,444 students.

APPENDIX B.

TABLE B1
THE ACCURACY OF ENROLLMENT GROWTH PROJECTIONS
Projections made in August 1991

Level/Year	Projected Enrollment	Actual Enrollment	Forecast Error
ELEMENTARY AND MIDDLE SCHOOLS			
October 1991	683,084	682,017	1,067 (0.1%)
October 1992	699,141	689,109	10,032 (1.5%)
October 1993	718,741	700,451	18,290 (2.6%)
HIGH SCHOOLS			
October 1991	268,835	270,134	-1,299 (0.5%)
October 1992	272,209	283,810	-11,601 (4.0%)
October 1993	276,224	291,983	-15,759 (5.4%)

Source: The Grier Partnership, *Enrollment Projections 1991 to 2000: New York City Public Schools*, Bethesda, Maryland, August 1991.

TABLE B2
ALTERNATIVE LONG-TERM ENROLLMENT GROWTH PROJECTIONS

Level/Year	Board of Education Projections		Alternative Projections	
	Projected Enrollment	Change in Enrollment	Projected Enrollment	Change in Enrollment
ELEMENTARY AND MIDDLE SCHOOLS PROJECTIONS				
October 1992 (Actual)	689,017	—	689,017	—
October 1997	722,202	83,093 (12.1%)	755,407	66,298 (9.6%)
October 2002	875,367	186,258 (27.0%)	796,110	107,093 (15.5%)
TOTAL ENROLLMENT PROJECTIONS				
October 1992 (Actual)	972,919	—	972,919	—
October 1997	1,096,598	123,679 (12.7%)	1,093,083	120,164 (12.3%)
October 2002	1,246,339	273,420 (28.1%)	1,159,363	186,444 (19.2%)

Source: The Grier Partnership, Maryland; Department of City Planning, New York City; and The State Education Department, Albany, New York.

APPENDIX B.

In assessing the comparative predictive accuracy of all the forecasts available, four key points should be made. First, all of the specified forecasts predict substantial enrollment growth in New York City public schools. Second, they all rely on a similar methodology, with all of them using a variant of the cohort survival method; the variety of predictions arises from differences in the amount of information incorporated into the analysis. Third, the Board of Education forecasts incorporate the greatest information currently available in making future predictions, making these projections the most accurate on a short-run, year to year basis; by using school-based and demographic data for various years in the past to predict the future, by district as well as by race and ethnicity, the BOE projections are the most comprehensive of all existing ones.[3] Fourth, all of the projections have a track record of substantial forecasting error in predicting long-term enrollment growth. In part, these errors result from the inability of all the projections to include specific social and economic changes in the city (and elsewhere) into their forecasts. There is, for example, no consideration of how major real estate developments within the City, planned or under construction, might affect population growth in particular districts. There is also no incorporation of shifting economic trends, in real estate or in the labor market, that might affect the extent to which commercial and residential flight occurs from the City. On the other hand, long-term enrollment projections are inherently difficult to predict given the many uncertainties regarding the future. Incorporating additional variables into the analysis may not substantially improve the forecasting accuracy of long-term projections.

COMPARING THE FORECASTING ACCURACY OF BOARD OF EDUCATION AND DEPARTMENT OF CITY PLANNING PROJECTIONS

This Section summarizes the findings of a comparison of the accuracy of the projections made by the Grier Partnership for the Board of Education (by both the Ethnic and Non-Ethnic methods) with projections that were furnished by the Department of City Planning in response to a request from the Board of Education.[4] Three sets of date were supplied by City Planning: (1) projections of 1992 enrollments based on 1991 data; (2) projections of 1993 enrollments based on 1992 data; and (3) projections of 1993 enrollments based on 1991 data.

The DCP projections supplied little detail (no grade-level projections, for instance), but did include projections for the elementary and middle levels in each of the 32 districts. Thus the accuracy of the three methods (DCP, BOE Ethnic, and BOE non-ethnic) could be evaluated at each of these levels.

---

[3] For instance, the projections of the Office of Management and Budget use a simple one-year cohort survival technique that assumes that the same percentage of children moving from one grade to another will do so in successive years. This implies, for instance, that if 90 percent of all ninth graders in 1994 become tenth graders in 1995 then 90 percent of ninth graders in 1995 will become tenth graders in 1996.

[4] The analysis presented in this Section is based on materials prepared by The Grier Partnership.

APPENDIX B.

The Evaluation Procedure

For each of the three projections furnished by the DCP, a separate "projection task" was set-up on the basis of which all three methods were compared:

Task 1 — Projecting 1992 enrollments based on 1991 data

Task 2 — Projecting 1993 enrollments based on 1992 data

Task 1 — Projecting 1993 enrollments based on 1991 data.

Under each of these tasks, comparisons were made of the projections made by the Grier Partnership's two methods (Ethnic and non-Ethnic) and the DCP method, at both the elementary and secondary levels, and on five different indicators of relative performance. The five indicators were chosen because they present a fairly comprehensive as well as objective overview of the relative success of these methods in meeting the needs of the Board for accurate forecasts of future facilities needs in the 32 individual Community School Districts.

The indicators are:

1. Number of districts in which each method came closest of the three in projecting actual enrollment.
2. Average percent projection error or deviation from actual enrollment (in absolute value, without considering sign) produced by each method for all 32 districts combined. In computing these average errors, absolute deviations were considered because otherwise negative errors in some districts would normally cancel positive errors in others, either wholly or partially. This could yield the impression that the overall accuracy of the projections was higher than it really was.
3. Highest percent projection error reached by each method in any single district.
4. Number of districts in which each method produce a projection error of five percent or more.
5. Number of districts in which the projection error for each method was under one percent.

After determining how well each of the three methods performed on these five indicators, numerical ranks were assigned to each. The most successful method received a rank of 1, the second a rank of 2, and the third a rank of 3. Rankings were assigned halfway in-between for ties; for example, if two methods tied for first place each received a rank of 1.5.

Next, the individual ranks were combined to produce a combined ranking score for each method and for each of the three projection tasks. This was done at both the elementary and the middle school levels. In these combined scores, the lowest number is the best. The best possible score is five, achievable by ranking best on each of the five measures. No method achieved this score at either level, but some came fairly close. The worst score is 15, achievable by ranking lowest of the three on each indicator. One method received this lowest score.

Finally, the combined scores were converted into simple ranks — first, second, and third. These ranks are shown in *Table B3*.

Results

In this limited test, none of the three methods proved to be superior under all conditions. However, the two BOE methods gave the better performances overall.

- The Non-Ethnic Method took first place in the combined rankings at both the elementary and middle levels in Tasks #1 and at the middle level in all three tasks. In all, it gathered four first place rankings, and two second places. Together, they gave it the best overall performance of the three.
- The BOE Ethnic Method placed first in Task #2 at the elementary level and was in second place in most other situations. It achieved one first place ranking, four second places, and one third place. This gave it the second best performance overall.
- DCP's method placed first in Task #3 at the elementary level, but stood in third place in all other situations. It achieved one first place ranking and five third place rankings, for the third-best performance overall.

Table B4, attached, gives full details on how each method performed with respect to each of the five indicators on each of the three projection tasks and at each level, elementary and secondary.

TABLE B3

RELATIVE STANDINGS OF THE THREE PROJECTION METHODS STUDIED

Combined Rankings of the Five Performance Indicators in the Three Projection Tasks

	DCP	BOE Ethnic	BOE Non-Ethnic
Task #1 - 1992 Based on 1991 Data			
Elementary	**3rd**	**2nd**	**1st**
Middle	**3rd**	**2nd**	**1st**
Task #2 - 1993 Based on 1992 Data			
Elementary	**3rd**	**1st**	**2nd**
Middle	**3rd**	**2nd**	**1st**
Task #3 - 1993 Based on 1991 Data			
Elementary	**1st**	**3rd**	**2nd**
Middle	**3rd**	**2nd**	**1st**
No. of First-Place Rankings	**1**	**1**	**4**
No. of Second-Place Rankings	**0**	**4**	**2**
No. of First-Place Rankings	**5**	**1**	**0**
Overall Performance	**3rd**	**2nd**	**1st**

APPENDIX B.

TABLE B4
COMPARISON OF THREE PROJECTION METHODS ON FIVE INDICATORS OF ACCURACY

	Task 1 Projection 1992 Based on 1991 Data			Task 2 Projection 1993 Based on 1992 Data			Task 3 Projection 1993 Based on 1991 Data		
	DCP	BOE Ethnic	BOE Non-Ethnic	DCP	BOE Ethnic	BOE Non-Ethnic	DCP	BOE Ethnic	BOE Non-Ethnic
Indicator 1 (Higher Number is Best)									
Number of Districts in Which Each									
Method Came Closest to Actual:*									
– Elementary Level	12	13	7	11	12	11	14	11	8
– Middle Level	9	13	10	11	9	13	8	11	15
Indicator 2 (Lowest Number is Best)									
Average Percent Error (Without Regard to sign):									
– Elementary Level	2.4%	2.0%	1.5%	1.8%	1.7%	1.8%	2.6%	3.2%	2.6%
– Middle Level	5.3%	2.9%	2.8%	5.6%	3.8%	3.6%	7.4%	5.2%	4.9%
Indicator 3 (Lowest Number is Best)									
Highest Percent Error:									
– Elementary Level	6.2%	7.8%	6.6%	7.5%	6.1%	7.4%	8.9%	12.8%	11.3%
– Middle Level	20.8%	9.5%	9.5%	33.6%	23.9%	22.5%	46.9%	27.7%	28.7%
Indicator 4 (Lowest Number is Best)									
Number of Districts in Which Error was 5% or More:									
– Elementary Level	4	2	1	2	2	2	5	5	1
– Middle Level	13	7	6	11	8	8	18	12	11
Indicator 5 (Highest Number is Best)									
Number of Districts in Which Error was Under 1%:									
– Elementary Level	7	10	13	11	12	14	11	4	4
– Middle Level	5	8	8	7	7	8	4	3	5
Combined Rank on All Five Indicators									
(Lowest Number is Best):									
– Elementary Level	12	10	8	13	7	10	7	13	9.5
– Middle Level	15	8	7	13.5	11	5.5	14	10	6

* Ties are credited to both methods, which may result in totals larger than 32.

APPENDIX C.

THE BOARD OF EDUCATION'S MEASURES OF SCHOOL UTILIZATION

To measure the extent to which a school is overcrowded, the Division of School Facilities of the New York City Board of Education calculates an index which represents a school building's percent utilization. This index is calculated as the ratio of student enrollment to the capacity of that school.[1] However, capacity is not merely the sum of the "raw" square footage of all acceptable classrooms in a school. Instead, raw capacity is adjusted each academic year to take into consideration the number of classrooms available for instruction, the types of classes that are being held in each classroom (i.e. pre-kindergarten, kindergarten, special-ed, other grades, etc.), the type of classroom under consideration (i.e. wood shops, computer rooms, gymnasiums, etc.), and the realistic amount of time that each room can be used in a day for instruction. For example, under standard city codes, classrooms used for special education must have less students than those used for general education. Therefore, if the number of special education students increases in a given academic year, the number of classrooms dedicated to special education must also increase which, in turn, reduces a school's operational capacity. The percent utilization of a school building is then calculated as the ratio of student enrollment to "adjusted" capacity and is expressed as a percentage.

There is very little doubt that adjusted capacity is the appropriate denominator in the utilization formula. However, it is important to understand an implication of this methodology. Given a fixed number of students in two different academic years, the adjusted capacity of a school building can vary even though the raw capacity of the school has remained the same. Consider the case where enrollments in two different school years are the same, but the number of students requiring special education increases. In this case, a school buildings utilization will increase. Thus, if one considers a school which is over capacity — i.e. utilized over 100% — to be overcrowded, the sense of over-crowdedness can be magnified not only if enrollments increase but, if the percentage of special need students increases.

Following is a technical description of how the Board of Education's formulas are constructed. The formulas vary according to the level of the school —elementary, middle or high school. The discussion below focuses on elementary and middle schools.

---

[1] The formula for this index was re-vamped in 1986-1987 by a diverse panel of participants in order to ensure that realistic and school-specific elements of school functioning were included in the equation. The index has been calculated according to this re-vamped formula since 1988.

APPENDIX C.

THE ELEMENTARY SCHOOL UTILIZATION FORMULA

Calculating the Capacity

The elementary school utilization formula measures capacity based on the number of rooms in a school that are used or could potentially be used to house classes. The formula also makes allowances for those subjects that require specialized —or cluster— space as well as funded space. Such space is subtracted from total capacity, thereby providing separate rooms for science, art, computers and funded programs.

The number of cluster or specialized rooms is derived from a standard allocation for cluster teachers and an analysis of the elementary educational program. The number of funded rooms is derived by calculating the number of students requiring remediation, the teaching load per funded teacher, and the space required per teacher (not student). The following steps are taken to calculate the unadjusted capacity:

1. Determine the number of rooms in each building presently in use for instruction (PK-9, MIS, and SIE). Libraries, offices, lunchrooms, gymnasiums and auditoriums are excluded.
2. Rooms between 240 square feet and 499 square feet used for non-instructional use are not counted for capacity and are assumed to be available for support/administrative use.
3. Each school is entitled to a room equal to or greater than 500 square feet for General Office, Principals Office, Audio Visual, Guidance, Medical/Nurse, Supply and Duplicating use. Such rooms are not counted for capacity.
4. Assign a maximum capacity to each instructional room, based upon whether they are designated as Chapter One or Non-Chapter One and upon the type of students using the room. The capacity assigned to each room reflects either the grade (PK, K 1,2,3, 4-6) or program (special education- C.S.D. or City-wide special education) occupying the room, and is changed to reflect new policy initiatives. If a room is used by an outside organization (not directly by the school), its capacity will reflect its program designation. If the outside organization is administrative (e.g., district offices) the room will be assigned a zero capacity. Full-size classrooms used by the parent (main) organization for administrative or non-teaching purposes will be included as having capacity. For the current year the room capacities are:

APPENDIX C.

Pre-Kindergarten ..... 36 (18 a.m. and 18 p.m.)
(Project Superstart Schools)

Pre-Kindergarten ..... 30 (15 a.m. and 15 p.m.)

Kindergarten 25

Grade 1 25

Grade 2 and 3 5

Other Grades 29
(Chapter One schools)

Other Grades 31
(Non-Chapter One Schools)

Special Education MIS 1 15

Special Education MIS 2-8 12
(Community School District)

Special Education ..... Based on program designation (City-wide)

All Other Classrooms 29
(Including vacant rooms and full-sized classrooms occupied by MIS 1-8 special education classes where vacant half size classrooms exist) (Chapter One Schools)

All Other Classrooms 31
(Including vacant rooms and full sized classrooms occupied by MIS 1-8 special education classes where vacant half size classrooms exist) (Non-Chapter One Schools)

5. Assign a potential capacity for each instructional room. This is done by dividing the total square footage of the room by 35 for Pre-K and Kindergarten and 20 for grades 1-9 and MIS 1-8. The numbers 35 and 20 represent the minimum square footage required per pupil according to the building code of the City of New York.
6. Compare the maximum and potential capacity for each room and take the lower of the two numbers. This is the capacity of that individual room.
7. The capacities of individual rooms are added to arrive at an unadjusted building capacity. This unadjusted capacity will change from year to year depending on the shifting usage of classrooms.
8. A specified number of cluster support rooms are subtracted from the unadjusted capacity and therefore not counted in capacity. The number subtracted varies depending on Chapter One status. It is meant to reflect the need for support rooms (rooms used by cluster teachers beyond the homerooms) required for the teaching of art,

music, science, computers, etc. These subjects are taught by specialized cluster teachers and often require separate, specialized, dedicated space. The following cluster adjustments are based upon:

- The present formula used by the Board of Education Office of Budget Operations and Review to allocate cluster teachers.
- The elementary educational program.
- The recognition that finite resources cannot support separate classrooms for all assigned cluster teachers.

The cluster adjustments for Chapter One and Non-Chapter One schools are as follows:

CHAPTER ONE ELEMENTARY SCHOOLS

*UNADJUSTED CAPACITY			NUMBER OF CLASSROOMS SUBTRACTED FROM CAPACITY
GE	–	1196	5
773	–	1195	4
350	–	772	3
210	–	349	2
70	–	209	1
0	–	69	0

* Excludes Pre-kindergarten and includes 50% of the kindergarten capacity

NON-CHAPTER ONE ELEMENTARY SCHOOLS

*UNADJUSTED CAPACITY			NUMBER OF CLASSROOMS SUBTRACTED FROM CAPACITY
GE	–	1376	4
626	–	1375	3
376	–	625	2
126	–	375	1
0	–	125	0

* Excludes Pre-kindergarten and includes 50% of the kindergarten capacity.

9. Federal and State funds are allocated to schools for pupil remediation. The number of students requiring remediation by school has been calculated by determining the City-wide average (presently 35%) of students reading below the State reference point as measured by the state reading test given in May of each year; and multiplying that percentage by the total capacity in each school building.

   One-half room is then assigned to funded programs for every 125 students requiring remediation. This is called the funded adjustment.

10. Subtract 1/2 classroom for use as a parent room and 1/2 classroom for use as a teacher's room if neither space has been provided.

11. To calculate the adjusted capacity:

    - Add the cluster adjustment and funded adjustment for each school to get the total adjustment.
    - Multiply the total adjustment by 29 (for Chapter One schools) or 31 for (Non-Chapter One schools) to arrive at the total capacity adjustment.
    - Subtract the total capacity adjustment from the unadjusted capacity to arrive at the adjusted capacity.

12. To calculate the utilization:

    To determine the utilization percentage for an organization, divide current enrollment by the adjusted capacity for each organization in a building. To determine building utilization, aggregate enrollments and adjusted capacities for all organizations in a building and divide the aggregated enrollment by the aggregated adjusted capacity.

THE MIDDLE SCHOOL UTILIZATION FORMULA

The middle school utilization formula differentiates between rooms that were designed for specialized purposes (dedicated rooms) and those that can be used interchangeably (non-dedicated). The formula begins with an unadjusted capacity and then applies an adjustment which is derived from the teaching load, and an analysis of the curriculum in the middle schools.

Calculating the unadjusted capacity:

1. Determine the number of rooms in each building presently in use or those that could potentially be used for instruction. Libraries, offices, cafeterias, administrative rooms, and auditoriums are excluded. Shops, gymnasia, band and typing rooms are included.

2. Rooms between 240 square feet and 499 square feet used for non-instructional use are not counted for capacity and are assumed to be available for support/administrative use.

3. Each school is entitled to a room equal to or greater than 500 square feet for General Office, Principal's Office, Audio-Visual, Guidance, Medical/Nurse, Supply and Duplicating use. Such rooms are not counted for capacity.

4. Assign a maximum capacity to each full-size classroom based upon whether they are designated as Chapter One or Non-Chapter One designation and upon the type of students using the room. The capacity assigned to each rooms reflects the class or program occupying the room and is changed to reflect new policy initiatives. If a room is used by an outside organization (not directly by the school), its capacity will reflect its program designation. If the outside organization is administrative (zero enrollment) the room will be assigned zero capacity. Full-size classrooms used directly by the school for administrative or non-teaching purposes will be included as having capacity.

For the current year the room capacities are:

- Special Education Community School District MIS 1 15
- Special Education Community School District MIS 2-8..... 12
- Special Education - Citywide ..... Based upon program designation
- Gymnasium:
  Chapter I Schools..... 56
  Non-Chapter I 60
- All other classrooms
  (Including vacant classrooms and full-sized classrooms occupied by MIS 1-8 special education classes where vacant half size classrooms exist)
  Chapter I Schools..... 28
  Non-Chapter I 30

5. Assign a potential capacity for each instructional room. This is done by dividing the total square footage of the room by 20 (the minimum square footage required per pupil according to the building code of the City of New York).

6. Compare the maximum and potential capacity for each room and take the lower of the two numbers. This is the capacity of that individual room.
7. The capacities of individual rooms are added to arrive at an unadjusted building capacity.

Deriving the adjustment to capacity:

Although the school week is forty (40) periods, not all classrooms can be used every period, every day.

DEDICATED ROOMS

The United Federation of Teachers contract stipulates that shop and home economics teachers will teach between 22 and 26 periods per week. Homeroom teachers are limited to 22 periods per week. If one accepts the premise that shops and home economics rooms should be programmed only for the subjects for which they are designed, then these classrooms are in use approximately 60% of the time:

1. All shops
2. All home economics rooms
3. Gymnasium (counted as two classrooms per school)
4. Funded classrooms (three per school/one per grade)
5. Art classrooms (two per school)
6. Computer classrooms (two per school)

Establishing a ratio of dedicated rooms to total rooms:

In order to derive an adjustment factor for dedicated rooms that is applicable to all middle schools, it is necessary to determine what percentage of all classrooms used at the middle school level are assigned to dedicated use. This number was derived and determined to be 29% of all rooms in use at the middle school level that are used as dedicated rooms.

Non-dedicated rooms:

If 29% of the total classrooms used by middle schools are used for dedicated use, then the remainder (71%) of the classrooms are interchangeable (non-dedicated) and can theoretically be used 100% of the time (40 periods a week).

Use of non-dedicated rooms:

While it is theoretically possible to program these rooms 8 periods a day, 5 days a week (40 periods), in practical application this proves impossible. The inability to program rooms at 100% is due to several factors:

1. All students and teachers are at lunch 1/8 of each day and thus cannot be programmed. This often occurs within 2-3 periods during the mid-portion of the school day thus making it impossible to utilize all classrooms during lunch time periods.
2. Teacher programs are structured to minimize travel time and distance between teaching periods within a school day; and to limit the number of different rooms to which a teacher is assigned within the teaching day and teaching week. This tends to maximize teaching and learning time.
3. The storage of specialized equipment and books for specific subjects limits room assignments. This is done to minimize the necessity of having teachers transport large quantities of materials and books thus reducing teaching and learning time. The science classroom is a good example.

Because of these programming limitations, non-dedicated classrooms are assumed to be programmable 90% of the time.

CALCULATION OF THE ADJUSTMENT TO CAPACITY:

If dedicated rooms comprise an average 29% of the total rooms; and these rooms are used 60% of the time, then:

$$.29 \times .6 = 17.4\%$$

If non-dedicated rooms compromise 71% of the total rooms; and these rooms are used 90% of the time, then:

$$.71 \times .9 = 63.9\%$$

If one adds the percent use of each:

$$17.4\% + 63.9\% = 81.3\%$$

The 81% represents the percent that all rooms can be used each day, every day. Stated differently, 81% of the unadjusted capacity equals the adjusted capacity: Unadjusted capacity (.81)= Adjusted capacity.

ESTIMATING SEAT NEEDS

For purposes of planning and illustration, the Commission has endeavored to estimate the number of seats to be provided by each of its recommendations. These numbers would need to be verified by further research and analysis by the parties implementing the recommendations.

I. THE PROJECTED GAP

Projected 2002-2003 Student Enrollment	1,246,339
Projected 2002-2003 Capacity	
Existing Seats + In Construction Seats	1,022,497
+ FY 1995-99 Capital Plan[1]	40,150
TOTAL	1,062,647
Projected Gap in Enrollment v. Seats	183,692[2]

II. CLOSING THE PROJECTED GAP

Year Round Calendar

As *Table D1* details, 53,728 seats will exist in air conditioned facilities as of the completion of the FY 1990-94 capital plan. The Commission recommends that all of these facilities be converted to year round use. The research on year round education indicates that the use of year round education increases a school's capacity by 30 percent. Thus:

53,728 x 30 percent = 16,118 seats

Extending the School Day

Extending the school day in the high schools by individual periods increases capacity by approximately 2 to 3 percent per period according to Board of Education Division of High School officials. Making schools move to end to end scheduling increases school capacity 100 percent.

Because the Commission recommends this effort only as a stop gap measure, it is unable to calculate the seats provided through this recommendation.

---

1 As of November 16, 1994. All other references to the Capital Plan in this appendix use these figures.

2 Assumes the perfect mobility of students to the available seats.

APPENDIX D.

TABLE D1
FULLY AIR CONDITIONED SCHOOLS

EXISTING SCHOOLS

DIST	SCHOOLS	BORO	CAPACITY
2	PS 234	M	560
2	PS/IS 217	M	862
4	PS 50	M	1,009
5	IS 201	M	1,200
6	PS 153	M	1,270
6	PS 5	M	939
6	PS 48	M	569
6	PS 528	M	224
6	IS 90	M	1,800
9	PS 170	X	211
10	PS 206	X	556
10	PS 9 Annex	X	360
10	IS 306	X	1800
10	PS 23	X	537
10	PS 279	X	807
11	PS 175	X	297
17	PS 397	K	423
17	PS 399	K	365
17	PS 6	K	697
17	PS 12	K	914
24	PS 7	Q	1,200
27	JHS 226	Q	1,713
30	PS 92	Q	702
31	PS 4	R	1,320
78	Norman Thomas HS	M	2,278
78	Murry Bergtraum HS	M	2,695
78	LaGuardia HS	M	2,523
78	Hillcrest HS	Q	2,446
78	Newtown HS Annex	Q	566
78	New Drop HS	R	2,831
78	Stuyvesant HS	M	3,031
	TOTAL:		36,705

SCHOOLS IN CONSTRUCTION

DIST	SCHOOLS	BORO	CAPACITY
15	PS 24	K	873
17	IS 2	K	1,100
17	PS 22	K	900
19	IS 171	K	900
32	PS 376 A	K	650
6	PS 176	M	650
6	PS 4	M	650
6	PS 8	M	650
24	IS 5	Q	1,100
27	PS 43	Q	1,100
27	PS 51 ECC	Q	300
78	Townsend Harris HS	Q	1,000
78	West Queens	Q	2,500
9	PS 171	X	300
9	PS 172	X	300
9	PS 173	X	300
10	PS 15	X	1,100
10	PS 20	X	1,100
10	PS 226	X	250
10	PS 3	X	650
10	PS 37	X	650
	TOTAL:		17,023

GRAND TOTAL: 53,728

Leasing

Leasing is a cost-effective means of providing new school space. Board of Education officials estimate that $10,000 can provide a new seat via leasing v. $40,000 to provide a new seat via new construction. Rental costs for Board of Education leases are currently assumed by the City government, and these costs are not calculated in these figures. Because the appropriate mix of leasing and new construction is dependent on many variables, the Commission is unable to calculate the number of new seats to be provided through this recommendation.

Collaborative Programs

As *Table D2* details, approximately 33,250 seats are freed up because of collaborative arrangements or other programs that take students out of the traditional classroom. The Commission believes that the Board of Education should increase the use of these programs. The Commission believes a 10 percent increase is possible. Thus:

32,250 x 10 percent = 3,325

Relocating Board of Education Administrative Space

In March of 1994, the Chief Executive for School Facilities of the Board of Education identified a potential 5,200 seats in overutilized school space occupied by administrative offices. Since that time, Division of School Facilities officials estimate that they have freed up approximately 200 seats by moving administrative offices out of schools. Thus:

5,200 – 200 = 5,000

Equalizing School Utilization

Each of the Commission's recommendations under this heading are designed to equalize the distribution of students across available space in schools. They do not serve to increase school space.

Evaluating Special Education

Because the work on evaluating special education is only beginning and there are many variables involved in that process, the Commission is unable to calculate the new seats provided through this recommendation.

Developing Collaborations With Private Business

Because of the number of variables involved, the Commission is unable to calculate an estimate of new seats provided through this recommendation.

APPENDIX D.

TABLE D2
NEW YORK CITY BOARD OF EDUCATION
DIVISION OF HIGH SCHOOLS
External Collaborations

PROGRAM	NO. STUDENTS	EST. SEATS*
City-As-School	1,067	853
Executive Internship	430	344
Bridge to Medicine	125	54
School of Coop Tech Ed.	1,100	550
NY Voc Training	650	650
OEC	1,300	1,300
OES	3,125	3,125
Evening High School	50,000	8,333
Summer School	90,000	10,500
SPISE	80	0
A/B Week Coop	2,800	1,400
Part-time Coop	6,500	2,785
TOP	1,650	0
Spec Ed TOP	1,100	0
Spec Ed Career Explor	100	0
Spec Ed Job Placement	300	0
Midwood High School	300	30
A.P. Randolph High School	200	60
Townsend Harris High School	200	20
Banneker Academy (Pratt)	89	89
Beacon (Fordham)	250	250
Kingsboro	360	360
Science Skills (N.Y. Tech)	268	268
Hostos Academy	309	309
Univ Heights	405	405
Brooklyn Coll Academy	264	264
Middle College	544	544
International	461	461
Medgar Evers	300	300
TOTAL	164,277	33,254

* Estimate based on Board of Education High School Division Official's determination of approximate time spent outside of the classroom setting.

APPENDIX D.

Increasing the Role of the Federal Government

Unable to calculate a precise seat number.

Increasing the Role of the City and the State

Implementing the above recommendations will require significant efforts on the part of the Board of Education. Once all of these efforts are exhausted however, a significant projected gap between available seats and the projected number of students will remain.

Projected Gap in Enrollment & Seats	183,692
Seats Provided via Above Recommendations	– 24,443
Remaining Projected GAP	159,249

The Commission believes that some part of the remaining projected gap needs to be met through additional financing from the state and city government for space acquisition.

Assuming that these seats are to be provided according to the current mix of new construction (40%) v. temporary seats (including leasing and portables, 60%) in the FY 1995-99 capital plan, then a cost can be estimated. Using $40,000 per seat for new construction and $10,000 per seat for leasing, the Commission estimates:

159,249 seats x 40% x $40,000/seat =	$2,547,977,600
159,249 seats x 60% x $10,000/seat =	$955,491,600
TOTAL	$3,503,469,200

EXECUTIVE SUMMARY

THE WORK OF THE CITIZENS' COMMISSION ON PLANNING FOR ENROLLMENT GROWTH

In February 1994, Ramon C. Cortines, Chancellor of the New York City Board of Education, called for the creation of an independent Citizens' Commission on Planning for Enrollment Growth in recognition of the growth of student enrollment in the New York City public schools. After eight meetings and the examination of enrollment projections, this Commission has concluded that the school system is currently experiencing explosive enrollment growth, and that current strategies are incapable of dealing with this growth. The only way to forestall this crisis is to significantly increase classroom space.

In October 1982, there were 918,384 students in the public schools. By October 1993, enrollment had reached 1,016,000 students. By itself, this increase exceeds the total public school enrollment in such large cities as Atlanta, Boston, or Newark. We estimate that public school enrollment in New York City will further increase by over 200,000 students over the next eight years. Given current demographic trends, enrollment will rise to close to 1,250,000 by the 2002-03 school year. This enrollment growth is occurring at all grade levels, most seriously in the high schools and elementary schools.

It is the Commission's belief that to receive an adequate education every child must have access to sufficient, safe, supportive, and stimulating space, appropriately designed for instruction. However, enrollment growth has been absorbed by the school system without a major investment in new space. Moreover, the school system's existing physical plant is deteriorating. As a result, there is little space available in the schools to solve the current enrollment growth. Many schools have reached full capacity, and in some districts virtually all schools are being utilized above capacity. In the most severe cases, classes are held in closets, bathrooms, hallways, and wherever any space can be found. More typically, rooms originally designed to serve as offices, cafeterias, gyms, libraries, storage rooms, and other common or specialized spaces have been reassigned for classroom use. Some schools have leased space or built temporary structures on the school grounds, but they have not provided enough space to alleviate overcrowding.

The school system's ingenuity in finding a place for every student should not blind us to the effect of overcrowding on student achievement and learning. In New York City the lowest income students in overcrowded schools have lower test scores than their counterparts in other schools. In one instance, there was a four to seven percent difference in the number of students in overcrowded schools passing the Regents Reading Examination and the number of similar students passing in schools that are not overcrowded.

The enrollment crisis before us requires that we take immediate action and not wait for the funds to construct new schools. Thus, the Citizens' Commission on Planning for Enrollment Growth recommends many short-term strategies for alleviating the problems of overcrowding. Still, no one should mistake our central concern: our now-serious problem will become perilous in the near future. If New York City's schools are to survive, both the City and State must find the funds to increase the capital budget for the City's schools within the next several years, not only to renovate and renew those existing schools that are in need of major expansion and repair, but also to build the versatile school spaces that we will require in the future.

THE RECOMMENDATIONS OF THE CITIZENS' COMMISSION ON PLANNING FOR ENROLLMENT GROWTH

Based on the projected pace and magnitude of enrollment growth, the Commission estimates the need to create 183,700 new seats to accommodate the number of students projected as of the 2002-03 school year. The Commission has identified a number of steps that can be taken immediately, as well as the longer-term steps to be taken to secure the funds for space for the increasing number of students and to alleviate overcrowding in the schools.

Neither exhausting existing opportunities, nor the most creative thinking, nor the best management practices will meet the projected enrollment needs of the public schools. The school system must immediately and vigorously do its part to demonstrate a good faith effort. At the same time, the city, the state, and the federal governments must find new ways to help meet the need, not only by allowing for greater creativity in the use of existing resources, but also by increasing funding out of existing resources, and making bold efforts to identify new funding sources with which to create new space.

The Commission makes the following recommendations:

Recommendation 1. The Board of Education should immediately implement a pilot plan to test the feasibility of converting the New York City schools to a year-round calendar by extending the school year from nine months to twelve months.

This recommendation should be implemented in two phases. The Board of Education first should designate one or two air conditioned high schools to operate on a year-round calendar, beginning in September 1995, and should assess the impact of year-round education on the costs of school operations. The Board should also plan to convert the remaining air

conditioned high schools and fifty percent of the air conditioned community schools to a twelve-month calendar. By September 1996, when the second wave of schools are put on a year-round schedule, the Board should develop a plan to extend year-round education to the other air conditioned schools and to any other schools interested in using this strategy to overcome crowding. By September 1997, the Board of Education should assess the impact of an extended-school-year calendar on school operations and student outcomes.

> **Recommendation 2.** The Board of Education should increase the relative use of leasing, and decrease the relative use of new construction, as a key strategy through which to increase system space capacity to address current enrollment growth.

The use of leasing as a mechanism to address rising enrollments provides a quick way to acquire school space, typically taking a maximum of two years to identify, acquire, and prepare leased space for school use, compared to an average of four to five years to create useable space through new construction. In addition, leasing space for schools has proven cost-effective; capital renovations for leasing average $10,000 per seat versus $40,000 per seat for new construction.

> **Recommendation 3.** The Board of Education should expand its efforts to form collaboratives with universities, businesses, and non-profit organizations that offer out-of-school learning environments for students.

The Board of Education currently operates a series of programs wherein New York City public school students receive instructional services outside of the confines of the traditional classroom setting. These programs range from work-experience programs in city businesses, to courses offered at local colleges, and to evening and summer programs allowing students to accelerate their education. The Commission recommends these programs be expanded, for both their educational and space benefits.

> **Recommendation 4.** The Board of Education should expand the practice of relocating administrative offices from school space.

At present, approximately 35 schools with utilization rates greater than 100 percent house Board of Education administrative offices that could be moved. The Commission recommends that all central and community school district administrative offices located in space in over-utilized schools be removed within the next year.

Recommendation 5. Community school districts should rezone significantly overutilized schools in cases where measurable educational underachievment is evident. The Board of Education should when necessary, intervene to ensure that a standard for this rezoning is enforced systemwide.

Recommendation 6. The central Board of Education should encourage inter-district cooperation to distribute available school space more evenly across community school district lines, where measurable educational underachievement is evident. The Board of Education should, when necessary, intervene to ensure that a standard for cross-district placement is enforced systemwide.

Recommendation 7. Community school districts and high schools should place future magnet and special program schools in significantly underutilized facilities as a mechanism to attract students to these schools as part of the school choice program. The Board of Education should ensure this is enforced systemwide.

Moving school attendance zone boundaries offers only a limited mechanism to address overutilization. Zoning changes carry with them numerous other considerations relating to integration, control by the local school district, and the wishes of the local community all of which might conflict with the desire to rezone to lessen overcrowding. As with zoning, redistricting has a number of impacts beyond overcrowding, and should not be pursued as a stand-alone strategy. Still, some strategies can be employed to promote and—in some instances—mandate equalization of utilization within and across school district lines. Recommendations 4, 5, and 6 reflect these strategies.

Recommendation 8. The Board of Education should continue to vigorously evaluate and reform the process of student placement into special education. If the rate of enrollment growth in special education programs remains the same or increases, the system's future space problems will increase.

The accelerated growth in the special education student population has strained classroom space because of the smaller class sizes required for special education. Many educators in the City believe this growth is not equivalent to an increase in disabilities, but rather is a result of decisions that incorrectly place troublesome children into special education. The Board should improve its methods of evaluating students being considered for placement in special education as well as of students being considered for transition out of special education. The Commission believes that these efforts will have a long-term positive impact on space, and encourages them.

Recommendation 9. The Board of Education should identify representatives of the business community who would more fully explore the opportunities for the use of vacant commercial space for schools.

The Commission is uncertain as to the availability of usable commercial space for education, the willingness and ability of the business community to provide the space in those locations where it is needed, and the ability of the Board of Education to embark upon this type of initiative. Thus, we recommend this idea be more fully explored by representatives of the business community identified by the Board of Education. We believe the business community would have insights into available opportunities, and could work with the Board of Education, the city government, and other relevant groups to initiate business-based programs.

Recommendation 10. The Board of Education should seek increased federal funding to respond to enrollment growth.

The federal government has recently enacted the School Facilities Infrastructure Improvement Act to provide grants for school construction, renovation, and repair, committing funding to capital expenditures for local schools, particularly schools with high compensatory education needs. At present, these funds are limited to use in a pay-as-you-go form. Were the legislation changed to allow the funds to act as a direct pledge against which to issue debt, the federal government could provide the city greater up-front funds with which to provide additional school space. The Board of Education should apply for these existing funds and lobby the federal government to increase appropriations for this Act and to authorize a change in the Act to allow for the use of these funds as a direct pledge against which to issue debt for space expansion.

In addition, the federal government funds the Emergency Immigrant Education Program to address the critical needs of recently arrived immigrant students. The Board of Education and the city could benefit from an extension of the timelines for which students are eligible to benefit from these funds, and should lobby to secure this change. Furthermore, the city has compelling reasons for considering space as a legitimate need for educating immigrant students, as acquiring adequate space to house new immigrant students is a necessary step in educating them. Funds should be made available to help meet these space requirements.

Recommendation 11. The Board of Education, the City of New York, and the State of New York should provide the New York City public schools a dedicated revenue stream that can be pledged to support debt issuance for increasing school space (i.e., a separate bonding authority).

Educational capital funds need to be isolated from other city spending by dedicating a revenue stream for school capital expansion and improvement. This revenue stream should be linked to a separate bonding authority for the Board of Education so that it could be leveraged to provide additional debt financing for the schools' capital needs separate from the City's capital budgeting process and without increasing the City's debt obligations, which the City has a limited ability to increase. Thus, the Commission recommends that the Board of Education be provided a dedicated revenue stream to support school space acquisition, that these funds be used to issue debt, and that the City and the State work cooperatively with the Board of Education to bring about the changes in legislation and current practice to make this possible.

IMPLEMENTATION

The Commission requests that the Chancellor and the Board of Education within 90 days provide a detailed public response to this Commission's recommendations. The Commission further requests that the Board share this report with appropriate local, state, and national entities. Furthermore, the Commission believes that the Chancellor and the Board of Education should form an oversight body charged to prioritize, monitor and report progress towards implementation of the recommendations of this report to the Chancellor, the Board of Education, and the general public at regular scheduled intervals.

We believe that these recommendations and this oversight mechanism, when implemented with the cooperation and dedication of the people of the school system and the broader community, can best address the future needs of our city's children. But the solutions that can be implemented by the school system itself—recommendations one through nine—should only be the first part of a long-term strategy for alleviating overcrowding in the schools. Alone, optimistically, they would not solve even 20 percent of the problem of overcrowding, and may make the problem more severe as we use scarce financial resources only for stop-gap measures. Thus, we call upon the various school communities—parents, teachers, administrators, and students—to accept the hardships of our proposed short-term solutions, but with an agreement and plan for the city, state, and federal governments to help provide the resources to implement a long-term solution for reducing overcrowding in the schools. If we value our children and their hopes for the future, there can be no other viable alternative.

MEMBERS OF THE CITIZENS' COMMISSION ON PLANNING FOR ENROLLMENT GROWTH

Mr. P. Michael Timpane – Co-Chairman; Professor and Former President, Teachers College, Columbia University

Dr. Ricardo R. Fernandez – Co-Chairman; President, Lehman College

Ms. Keishea Allen, Student, South Shore High School

Ms. Jan Atwell, Chairperson, Educational Priorities Panel

Mr. Daniel Biederman, President, Grand Central Partnership

Mr. John Caiazzo, Vice President for Construction, Olympia & York

Mr. Jerry Cammarata, Member, Community School Board No. 31

Mr. Geoffrey Canada, Executive Director, Rheedlen Centers for Children & Families

Dr. Angela Carrasquillo, Director - Teachers of English to Speakers of Other Languages, Fordham University

Ms. Chiara Coletti, Vice President of Public Affairs, New York Newsday and Newsday

Mr. Ezra Ehrenkrantz, FAIA, Principal, Ehrenkrantz & Eckstut Architects

Ms. Ramona Hernandez, Instructor - Social Science Department, Fiorello H. La Guardia Community College

Ms. Bonnie Impagliazzo, Assistant to Brooklyn Borough President Howard Golden, Office of the Brooklyn Borough President

Ms. Patricia Kobetts, Principal, John Bowne High School

Ms. Emma E. Macari, Vice-Chancellor for Facilities, Planning, Construction & Management, City University of New York

Mr. Edward T. Marshall, President, ETM & Associates

Ms. Graceann Morawek, Teacher, Paulo Intermediate School

Mr. Joshua Muss, President, Muss Development Company
[Mr. Muss wishes to express his reservations about the discussion of Addressing Program and Personnel Needs in the body of the Report]

EXECUTIVE SUMMARY

Ms. Raseh Nagi, Community School District Superintendent, District 28

Mr. Cao K. 0, Executive Director, Asian American Federation of New York

Mr. Joseph Pacheco, Puerto Rican/Latino Educational Roundtable

Mr. Jerald Posman, President, Ellis Paxxon Health Services

Mr. David Sherman, Vice President, United Federation of Teachers

Ms. Hildy Simmons, Managing Director, J.P. Morgan & Co. Incorporated

Mr. Donald Singer, President, Council of Supervisors and Administrators

Ms. Lois Voyticky, PTA President, P721R

The Honorable Priscilla Wooten, Chairperson, City Council Education Committee

Mr. Alfonso Wyatt, Fund for the City of New York

Copies of the full report can be ordered from the Office of the Chancellor, New York City Board of Education, 110 Livingston Street, Brooklyn, N.Y. 11201.

BOARD OF EDUCATION
OF THE CITY OF NEW YORK

Hon. Carol A. Gresser
President

Hon. Irene H. Impellizzeri
Vice President

Hon. Louis DeSario

Hon. Sandra E. Lerner

Hon. Luis O. Reyes

Hon. William C. Thompson, Jr.

Hon. Ninfa Segarra-Vélez

Hon. Tiffany Raspberry
Student Advisory Member

Hon. Ramon C. Cortines
Chancellor